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WOOL MORE ACTIVE, PRICES ADVANCED.

As we have anticipated and advised the readers of the Michigan Farmer during the past three months the price of Wool has advanced within the past thirty days and the market is now more active and firm. Manufacturers have stood it as long as they could, and now the great demand for woolen goods for winter use is forcing them to open their pockets a little more freely. We did not belong to that class of papers who cried Wool up just previous to the new clip, and immediately after used every effort to bear it down; why they pursued such a course is best known to themselves; but we have honestly thought, that although there was a temporary dullness in the market during the warm months, and consequently an apparent permanent decline in prices, that fine wool in Michigan would bring ere the next clip from 70 to 75c. per pound and perhaps more, and we now believe that the time is approaching for the realization of this truth, notwithstanding that many have disagreed with us and advised us to the contrary, and some have even been vindictive and threatened to, and have stopped the Farmer, because we have unwaveringly stood for the rights of the wool grower. Many of the agricultural and other journals throughout the country have copied our articles and belabored us right editorially about our "crying wool up"—among these the "Ohio Wool-grower" was quite prominent—all of them have now begun to "trim sails"—one says "the market is more active and prices better" another that "All descriptions of woolen goods are moving rapidly, and the West is purchasing more liberally than ever before!" still another which three weeks ago advised farmers to close off their stock at 55 a 60c. says "we think that 65 cents is a fair price for Wool and that it will bring that, and that wool was more in request"—thus they quietly "whip the cat around the stump," and are preparing to fall in the current that is carrying wool up, and in a little while they will all be ready to help give it a further "boost up," notwithstanding they have tried to "pull wool over your eyes" for the last 90 days. We have kept ourselves informed outside of newspaper

pers, and have known that the stock of woolen goods on the shelves of dealers in the East and West was smaller than ever before known, and that the time would come when they *must* have the goods, and that the manufacturers *must* have the wool, and that the grower *must* have a fair price for it; if he would only hold on long enough. Wool has advanced from 2 to 3 cents per pound within the past 30 days, at this rate it is a better investment than government 5-20's or any other stock. Watch the market and use your own best judgment. Below we give extracts from the U. S. Economist of Sept., 12th in regard to the N. Y. market, and also the Boston market, the state of things at those points governing the prices in Michigan and throughout the West.—W. S. R.

NEW YORK WOOL MARKET.

Our market for wool has been exceedingly active the past week, on speculation and for manufacturing purposes—particularly the latter—and prices are firmer, though not notably higher. The operations are more numerous than reported last week, and there is more of a general demand, still the bulk of the transactions have been confined to about three large operators, viz: Messrs. Bullock's Sons and W. C. Houston Philadelphia, (the largest purchasers), Messrs. Hilton & Co., Boston, and the Hartford Carpet Company, Hartford, Conn. These parties have taken the bulk of the wool sold. Outside of this, there has also been more inquiry from manufacturers and some few demers, so that the market generally may be considered more active, and wool moving.

Foreign wool seems the descriptions most sought after, particularly as many manufacturers have and are changing their machinery to the use of Foreign Wools, under the "Goddard" principle, and these descriptions are finding much favor, being cheaper and just as desirable for many purposes as domestic. Considering the prices now ruling abroad for Foreign Wool, prices here are low, and with a few more weeks of as active trade as has been witnessed the past three weeks notwithstanding the large imports, the value of

Foreign Wools must increase. There is a disposition, however, to sell at the present, and the sales in small lots aggregate quite a business.

It is truly wonderful to see the harvest the Foreign importers are having, and they are evidently inclined to "make hay while the sun shines," to the very great disadvantage, we think, of our growers. They have produced wonders this year. Many manufacturers could not be induced to use Foreign Wool, heretofore, where they are now using it largely, and as for changing their machinery to suit any particular kind of wool, why that was out of the question. Time, however, works wonders. It was thought we

could not get along without Cotton, but we have, and if we fail in one thing there is always at hand a substitute, and people, like the camel, should not get their "back up," for it may stay there.

Domestic Wools have been more in request from manufacturers, and are firmly held at range of 60a68c, some small parcels changing hands at rather higher figures. As regards the future of wool, opinions at this writing are about equally divided. Some say that wools will be higher, based upon the small supply of cotton, and that the yield of Domestic Wool this year does not exceed that of last year, instead of 20,225 per cent, increase is many of the growers have crowded their lands with sheep, over-fed them, and that the production will be less than supposed. Others argue that as Foreign Wools are largely taking the place of Domestic by a change of machinery, and being cheaper, it will effect the value of Domestic, and must reduce its price. These are the opinions, and we give them for what they are worth. Things, however, are too much in the fog as to advise which course to pursue, but we are inclined to favor the idea of selling at even present prices, for "a bird in hand is worth two in a bush;" and we do not think there will be any cause for regret.

The goods market exhibits an activity that is unparalleled in the history of the trade. All description of Woolen goods are moving rapidly, and the West is reported as taking more goods this season and purchasing more liberally than ever before. The commission houses and jobbers are up to their eyes in business, and the "ball" is in full motion. [There is more in this paragraph than all the rest, and it is what growers should govern themselves by.—W. S. R.]

The sales for the week include 180,000 lb Fleece at 60a68c, including 60,000 lb Chinese Ohio at 68c, with some little lots of 1a,300 lb, at higher figures. Pulled wools are in fair stock, and range from 60a70c—20 bales sold within the range; 250 bales California at 45a50; 1,200 do African and Province 22a30c; 1,380 do Cape 29a35c, including a cargo of 500 bales, to a Boston house, supposed at 32c; 1,140 bales Mestiza 18a30c; some low Buenos Ayres 16c; 55 bales do better quality, 28c; 10,000 lb slightly damaged Mexican 25c; 200 bales Rio Grande 100 do Smyrna, and 400 do Washed and Scoured German and Russian, on private terms; 240 bales Cordoya 30a37c; 10,000 lb Donskoii 41c; 20,000 lb Caps 35c; and several other little lots of Domestic and foreign, all within the range of the above. At the close several quite large transactions in Foreign were pending, but we are prohibited from giving the "points" and omit them. We expect next week to record increased activity in all descriptions.

BOSTON WOOL MARKET.

Sept. 12th, the market for fleecy and pulled wool remains the same as previously noticed. The transactions of the week have been considerable but the demand is irregular, manufacturers purchasing only to supply immediate wants. The transactions of the week have been near 300,000 lbs fleece and pulled, prices of fleece ranging from 62 $\frac{1}{2}$ a 70c, with considerable sales of very choice Iowa, Michigan and New York at the latter rate; and pulled at 65 a 87 $\frac{1}{2}$ c for No. 1 super and extra. Some lots of lamb wool have been sold at 60c. The range of prices of fleece is from 62 $\frac{1}{2}$ a 75c, but it would be difficult to obtain over 70 a 72c for the finest or most desirable lots of fine wool on the market, and very good lots of Michigan and other Western are selling from 65 a 68c per lb. The future of the market appears to be as uncertain as ever. In the country we learn of some considerable purchases at 58 a 60c, but the market in Ohio and other leading points is quite as firm as previously noticed, so far as large holders are concerned. Wool in our market continues to arrive very sparingly and one active week would clean us out. Manufacturers, however, are disposed to hold back, and so far this policy has worked well in settling down prices. The stocks in the hands of the manufacturers are, however, reduced to a low point, and some considerable lots must be purchased from week to week to keep their mills in operation. Canada wool remains without change. There have been sales of 50,000 lbs at 60 a 65c, mostly clothing wools at 60c; long staple combing wool brings 65c.

EUROPEAN MARKETS AND CROPS.

As much depends upon the European Crops and the consequent state of foreign markets in governing the prices of breadstuffs in the United States; we give below the latest reliable information in regard to the harvest and prices. The latest Mark Lane Express received, dated the 17th ult., says of the crops in England and on the continent: "With another week of splendid weather, a large proportion of the fine crop of wheat may be considered either gathered or safe. It would appear that it will be no difficulty this season to find samples weighing 68 lbs per bushel, and many oats exhibited are 44 lbs per bushel. Barley must vary much, and but a small yield of oats will be gathered on light soils. Peas also turn out less than was expected, and beans will be very partial. Potatoes are good, but not abundant, and the West and Southwest of Ireland are now beginning to complain of disease, while in Prussia the yield is deficient. The North of Europe, it would appear, has not had weather equal

to our own, the harvest having been impeded by rain, which has effected the condition of much of the new corn brought to market, but prices have generally been pointing downward for want of encouragement from England. France continues to take the lead in a lower scale of prices, the liberal offers and fine quality giving millers an assurance of plenty. The same state of things has obtained here. With but little showing at the several country markets, there has been less disposition to buy, and prices for old wheat must be quoted fully is under last week; while, where new has appeared in quantity, a still greater reduction must be noted, with a conviction that rates have not yet reached their lowest.

Prices are lower in Paris. Wheat prices were gradually receding in Belgium. This was the case at Antwerp, with little doing in any description of corn. Courtrai was almost exclusively provided with new grain.

Rotterdam was cheaper for wheat, and dearer for rape-seed. Almost nothing was doing at Amsterdam, though Polish wheat was nominally quoted at 55s.

The harvest was about finished in the mountains of Switzerland, and the peasants in the plain were very desirous of rain, the pasture in many places being burnt up. The prices of wheat in the several towns fluctuated, the tendency being generally downward.

At Hambro, business was extremely dull, but wheat remained held at about previous rates, say to 51s per qr for fine Wahren red.

The harvest news at Bremen was very contradictory, and too much remained yet in the field to come to any conclusion. Business very heavy, and rates nominal.

The weather has varied at Konigsberg. Rye was mostly got in, the weight being very different, and much was shown in damp condition. The wheat had also suffered from rain. Almost nothing was doing, and rye was lower.

Berlin notes alternations between great heats and gentle rains. Arrivals by water still moderate. It was becoming a matter of certainty that the crop of late potatoes would be seriously less than last year, in consequence of the long drought. Rye was much lower. Wheat and other grain gradually declining.

At Straubing, the harvest was all well got, of fine quality and good yield.

Growers of wheat at Venice were generally in their demands, but speculators were deterred from buying by advices from Europe and the Mediterranean. There had been a fine fall of rain just in time for the maize, which it was now expected would turn out an average crop. Oats were dearer, in consequence of a short crop in the neighborhood, as well as in the Banat.

Deliveries of the new crop were increasing in Algeria, but not sufficiently so to produce the fall anticipated.

It would appear from the above that the harvest has been generally bountiful. If such is the case it will of course have a tendency to keep down the prices of breadstuffs, as we depend a great deal upon the foreign demand to advance upon, and if there is little request from abroad our farmers will have to depend almost entirely upon the home market. We think, however, that wheat will maintain a fair price. In Michigan white wheat has been much injured and will obtain a considerable advance over other kinds in consequence of the small crop. Amber and red wheat, has it is understood, produced a larger crop than last year, consequently this will materially affect the medium and common brands offered when milled. Michigan white wheat was bringing \$1.40 a 1.50 in the N. Y. Market on the 10th inst. In Detroit, No. 1 white—No. 1 red, 1.08. No. 2 1.04. We would call the attention of farmers and dealers to the action of the Detroit Board of Trade in relation to inspection of wheat; this crop will hereafter be governed by this standard in Michigan.—W. S. B.

Inspection of Grain.—Rules for 1863-4.

The board of Directors of the Detroit Board of Trade adopt rules and regulations connected with the inspection of the grain coming to this city from the crop of 1863, and Secretary Ray Haddock, Esq., has furnished us with the following as the rules which have been officially adopted for the grading and inspection of grain for the season of 1863-4:

WHITE WINTER WHEAT.

Extra White Wheat—To be pure white winter wheat, sound, plump, well cleaned, and moderately uniform in color.

No. 1 White Wheat—To be pure white winter wheat, sound plump, and moderately clean.

No. 2 White Wheat—To be pure white winter wheat, sound, not so plump or clean as No. 1.

Rejected White Wheat—To be white winter wheat, to include inferior or dirty wheat; but not damaged so as to be unfit for flouring.

AMBER WINTER WHEAT.

Extra Amber Wheat—To be pure winter wheat, sound, plump, well cleaned, and of uniform color.

No. 1 Amber Wheat—To be pure winter wheat, sound, plump, and moderately clean.

No. 2 Amber Wheat—To be pure winter wheat, sound, but not so plump or clean as No. 1.

Rejected Amber Wheat—To be winter wheat, to include inferior and dirty wheat, but not damaged so as to be unfit for flouring.

All white and amber wheat mixed to be inspected as amber wheat.

Damaged and unsound wheat not good enough for flouring, to be no grade.

SPRING WHEAT.

No. 1 Spring Wheat—To be sound, plump, and well cleaned.

No. 2 Spring Wheat—To be sound and reasonably clean.

Unsound and inferior spring, no grade.

BARLEY.

No. 1 Barley—To be sound, plump, clean, bright and uniform color.

No. 2 Barley—To be sound, and reasonably well cleaned.

RYE.

No. 1 Rye—To be sound, plump, and well cleaned.

No. 2 Rye—To be all other rye not merchantable.

CORN.

No. 1 Corn—To be sound, dry and moderately well cleaned.

No. 2 Corn—To be sound, dry, and not well cleaned.

Unsound and damaged corn, no grade.

OATS.

No. 1 Oats—To be sound and well cleaned.

No. 2 Oats—To be all other oats not unmerchantable.

Resolutions were also adopted for the government and instruction of the grain inspectors, allowing them a salary of \$1,200 per annum, and the services of an assistant when necessary.

Live Stock in the Eastern Market.

The following was the state of the live stock market in Albany on Monday the 7th inst.—It will be seen that prices are relatively lower than at previous quotations.

BEEVES.—The supply is again taking quality and weight into consideration, much greater than last week. Chiefly owing to this fact, notwithstanding the fact that the New Yorkers had a brisk and profitable trade last week, and are here in full numbers now, buying pretty freely, prices are lower than they were then. This is most noticeable when the quality of the offerings for the two weeks are considered. Last week nearly all of the droves were made up of common to ordinary thin, grass-fed steers or coarse oxen. This week a majority of the droves are of very good quality, with more than the usual sprinkling of "extra." Nevertheless the prices now obtained are no better than were paid seven days ago. The difference in quality is equal to 1-8 a 1-4c per lb, live weight, and the market is thus much lower. About 1,000 head will go Eastward.

The number of cattle received was 4,150, of which 477 were from Michigan.

SALES.—Of the different transactions we note particulars of the following.

R. Quinn, 38 ordinary Michigan at \$45 per head. Average 1,075 lbs. Gates Sherwood, 33 fair Michigan at \$56 per head. Average 1,175 lbs. R. D. Gorman, 21 light Michigan at 4½c per lb. Average 950 lbs. Coon & Hosbury, 73 Michigan at \$56 per head. Average 1,550 lbs. Also 18 ordinary Michigan at \$45 per head. Average 1,050.

SHEEP.—The receipts being nearly one-half less than last week, the market is somewhat buoyant. The demand for Albany and surrounding localities, as well as on New York account, is fair. The sales of sheep made were at 4½c per lb. for light common, to 5c for good quality, averaging in the neighborhood of 100 lbs. Lambs are without change.

Hogs.—The weather and a light supply combined with a speculative demand that started in New York last week, has caused an extraordinary spring in prices, 6c per pound being freely bid for good corn-fed, while for extra heavy do 6½c has, in some instances, been asked and obtained.

AID SOCIETY'S NORTH-WESTERN FAIR.—The ladies of the different soldiers aid societies in the Western States are making arrangements for holding a fair at Chicago during the last week of October and the first of November. The managers say: "Assurances have been received that the States of Illinois, Michigan, Wisconsin, Iowa and Minnesota will generally join in this project, and substantial offers of aid have been proffered by persons in these States." They hope to realize \$25,000 for the benefit of the soldiers, and to secure this amount it is proposed to have concerts, tableaux, lectures and other entertainments, in addition to the attractions of the fair. They invite the co-operation of all the Aid Societies of the West in helping along the work.

List of State Fairs for 1863.

New York	Utica	Sept. 15-18
Ohio	Cleveland	Sept. 15-18
Lower Michigan	Dubuque	Sept. 15-18
Michigan	Kalamazoo	Sept. 22-26
Upper Canada	Kingston	Sept. 22-25
Indiana	Indianapolis	Sept. 28-Oct. 3
Illinois	Decatur	Sept. 28-Oct. 3
Illinois Trial of Implements-Decatur		Sept. 21-26
American Institute	New York	Sept. 7-3 weeks
Illinois Horticul. Soc.	Rockford	Sept. 8-11
California	Sacramento	Sept. 26-Oct. 1
Lower Canada	Montreal	Sept. 15-18
Kentucky	Louisville	Sept. 15-18
Pennsylvania	Norristown	Sept. 29-Oct. 2
Penn. Horticul. Soc.	Philadelphia	Sept. 15-18
Kansas	Leavenworth	Oct. 6-9

COUNTY FAIRS.

CALHOUN COUNTY FAIR.—The fifteenth annual fair of the Calhoun County Agricultural Society will be held at Marshall, on Wednesday, Thursday and Friday, September 30th, and October 1st and 2nd, 1863.

OTTAWA COUNTY FAIR.—The Ottawa County Agricultural Society, will hold its Eighth Annual Fair, on Wednesday and Thursday, Sept. 23d, and 25th, 1863. We are glad to see that Ottawa County is so far advanced in agriculture as to present so liberal premium list.

THE CASS COUNTY FAIR.—The Annual Fair of the Cass County Agricultural Society, will be held on their Grounds, one half mile south of this village, on Wednesday, Thursday and Friday, Oct. 7th, 8th and 9th. From present indications, it bids fair to excel all former agricultural exhibitions that have been held in this county. W. G. BECKWITH, President.

BARRY COUNTY FAIR.—At a meeting of the officers and members of the Barry Co. Agricultural Society, it was decided to hold the annual Fair, on the Fair Grounds in Hastings, on Wednesday and Thursday, the 14th and 15th days of October next.

President, Gilbert Striken: Secretary, J. M. Nevens, Treasurer, S. C. Prindle.

FARMERS, MECHANICS AND STOCK BREEDERS ASSOCIATION.—This Association will hold its Annual Fair, at Jonesville, on Wednesday, Thursday and Friday, October 14th, 15th and 16th. The premiums range from \$30 downwards and embraces everything in general, pertaining to such exhibitions. HENRY SACKER, President; O. R. CARGILL, Secretary; G. C. MONROE, Treasurer.

CALHOUN COUNTY FAIR.—The Agricultural and Mechanical Association, will hold its Annual Fair at Battle Creek, October 6th, 7th and 8th. The premium list is unusually large and should call out the best in Agriculture and Mechanics which the locality can produce. SIMON BAKER, President; D. B. BURNHAM, Secretary; V. P. COLLIER, Treasurer.

MONROE COUNTY FAIR.—The Monroe County Agricultural Society, will hold its Annual Fair in the city of Monroe, October 1st, and 2d. The very efforts are being made to render this one of the best exhibitions ever held, and large premiums are offered. A. G. BATES, President; L. DARRAH and J. P. WADFORD, Vice Presidents; E. G. MORTON, Secretary; S. M. SACKETT, Treasurer.

HILLSDALE AND LENAWEE UNION FAIR.—This fair will be held on the 6th, 7th and 8th of October next, being on Tuesday, Wednesday and Thursday. We hope and expect a general attendance of the farmers and others residing within the towns represented in the organization—Somerset, Wheatland, Jefferson, Pittsford, Ranson and Wright in Hillsdale County; Woodstock, Rollin, Hudson and Medina in Lenawee County. We ask our readers to bear this notice in mind as we may not have occasion to give another notice.—*Hudson Herald.*

WASHTENAW COUNTY FAIR.—The Annual Fair of the Washtenaw County Agricultural and Horticultural Society, will be held at the Fair Grounds, in the City of Ann Arbor, on Wednesday, Thursday and Friday, September 30th, and October 1st and 2nd 1863, as usual this sterling agricultural county has a most thorough list of premiums. Washtenaw holds one of the first positions in the State, in agricultural, horticulture and stock raising, consequently the fair must be one of the best, and therefore will well pay for an attendance.

ST. JOSEPH COUNTY FAIR.—The Thirteenth Annual Fair of the St. Joseph County Agricultural Society, will be held at Centreville, on Wednesday, Thursday and Friday, Sept. 30th and Oct. 1st and 2d. We have received the premium list which is full and liberal, our thanks are due for a membership ticket. We shall endeavor to visit the fair and get a taste of the St. Jo. peaches and other fruits, which are said to be among the best in Michigan. RICHARD DOUGHERTY, President; L. A. CLARK, Secretary; E. STEARNS, Treasurer.

THE AGRICULTURAL SOCIETY.—The adjourned meeting of the Clinton County Agricultural and Horticultural Society, held at De Witt, on Saturday last, was well attended—nearly every town in the county being represented—and an enthusiasm manifested which is favorable augury for the success of the undertaking. The Society was reorganized by the election of the following officers:

President—A. R. MARVIN, of De Witt; Vice President—A. J. REED, Watertown; Secretary—H. C. HODGE, Bingham; Treasurer—HARVEY, ALEXANDER, Olive.

Board of Directors—S. Hoyt, M. Christopher, De Witt; D. P. Dryer, Bath; J. C. Brunson, Victor; L. Swagart, Bengal; R. S. Vanscoy, Essex; David Clark, Eagle.

It was unanimously voted to hold a County Fair, at Dewitt, on Thursday, the 8th day of October next.—*Republican.*

STATE ITEMS.

Mr. D. Green has laid on our table a peach measuring 10½ inches in circumference, and weighing over half a pound.—*Albion Herald.*

WOOL.—E. W. Giddings took in 3000 pounds of wool on the 20th inst. This, we believe, is the largest wool receipt of the season. One load brought the grower \$945.—*Romeo Argus.*

SUCCESSFUL PLANTING.—We are informed by D. Henning, Esq., that of the 1,000 Peach trees planted on his farm last Spring he has not lost more than 25 or 30. Very successful.

PRICE OF SHEEP.—John Peach, drover, informs us that he has within a week or two purchased 1,300 sheep in this vicinity, for which he paid \$8,000, or about \$2.32 per head.—*Ann Arbor News.*

Wheat and Wool are Without material change in our market—the former ruling at \$1 a \$1.10 per bushel, and the latter at about 60 cents per lb.—*Albion Miner.*

Remember the Berrien County Fair to be held at Niles City, Sept. 30, and Oct. 1st and 2d. This is the farmer's festival, and should be well patronized.

THE FAIR IN OUR COUNTY.—Preparations are making for the most extensive Fair ever held in Sanilac County. Those who would like to see a good Fair in our county, must be on hand the first and second days of October.—*Sanilac Jeffersonian.*

TALL CORN STALKS.—Mr. Sackett, Esq., of Marengo, left at this office a specimen of White Dent Corn raised by him, which is over 12 feet in height. The ears are very large, well filled, and are six feet from the ground—a good evidence of the strength of the soil.—*Marshall Expounder.*

WOOL.—Mr. S. B. DAYTON, a farmer residing in the southern part of this county, sold in Lansing a few days since, a single load of wool numbering 549 fleeces, and weighing 2,372½ lbs. The price paid was 58c. per lb., and the load brought the round sum of \$1,375.92.

LARGE PLUM.—We have received from T. P. Barnum, of Carlton, a Plum, called the Magnum-bonum, weighing two ounces, and measuring 5½ inches in circumference. It is truly a fine specimen. Who can beat it?—*Barry Pioneer.*

THE Fifteenth Annual Fair of the Michigan State Agricultural Society will be held at Kalamazoo on the 22d, 23d, 24th and 25th days of September. Over four thousand five hundred dollars in cash is offered in premiums, which is a great inducement for persons to carry in the best of their farm produce and stock.

FRUIT.—The St. Joseph Traveller says there has been shipped from St. Joseph this season, up to and including September 9th, 1863:

Baskets and boxes of peaches and pears	16,082.
Bbls. apples	1,597.

LUSUS NATURÆ.—We were shown by Wm. Francis, Esq., a curious freak of nature in the shape of a chicken, with three eyes and two bills. Over the centre of the batch of bills is one large eye, and on either side one of smaller dimensions. Full-faced the animal is a perfect Cyclops. It was hatched on the plantation of the above mentioned, and is now to be seen, by those who are interested in such objects, at the store of J. W. Shadaker, Esq.—*Allegan Journal.*

The yield of fruit this season in Michigan will be the largest ever known. In 1861 the peach crop yielded about 60,000 baskets; last year, owing to the severe frost in May, it reached only about 50,000 baskets; from the most extensive fruit-growers the peach crop this year will amount to 250,000 baskets. The orchards are literally loaded with velvet-cheeked fruit, which is now ripened ready for market.

TROTTING MATCH.—The trotting match between Mr. Green's black horse Henry Clay, and the Stockbridge Chief came off at the Washtenaw County Fair Grounds, and attracted a crowd. Henry Clay came out ahead the two first heats but was beaten the third last by the Stockbridge Chief. Trotting was very fine indeed, and the horses very nearly equally matched. Time 2:51 to 2:56.

A WOOL WAR!—It seems that two gentlemen of Jonesville, are bound to have some wool pulling done. As wool is an important subject they seem determined to make it decidedly wooly, as "clippings," "latter ends," "tags," and "droppings" are all mixed up in the affair. The principals are Messrs. Henry Hurl and J. Collins, and the Jonesville *Independent* stands as second for both. We should like to publish the discussion, but they are rather late at hand for more immediate and general remarks.

RAIRIE CHICKENS.—The Dubuque Times says that never since Iowa has been settled by the white man, have prairie chickens been so numerous as at the present season. In Buchanan and Blackhawk counties they can be killed with stones and clubs, and hunting them with guns is next to no sport at all. So plenty are they that the farmers importune hunters to try their luck on their grounds, and in some instances they have manifested a willingness to pay for the killing.

MICHIGAN SOUTHERN RAILROAD.

The Vice President of the Michigan Southern Railroad, M. L. Sykes, Esq., has recently issued a circular to the employees of that road, in which, after alluding to the decease of Superintendent Campbell, and of his value to the company as an able, energetic and devoted officer, he announces the following organization for the operation of the road:

Mr. Charles Paine, Division Superintendent at La Porte, will continue in charge of the western division, with full authority in matters relative to the repairs and working of the road, supervision of stations, and movement of trains on his division.

Mr. C. F. Hatch, Division Superintendent, Adrian will have charge of the northern and eastern division (including Three Rivers Branch and the Air Line east of Goshen) with full authority on his division, as in the case of Mr. Paine.

Mr. H. L. Sargent will continue in the office of Chief Clerk in Superintendent's Department, in Toledo, as formerly.

William F. Stanton, Cashier at Toledo, will co-operate with Mr. Hatch, having general advisory charge of local matters at Toledo, during the absence of the General Superintendent.

Mr. John J. Adam, Auditor at Toledo, will receive requisitions for supplies of all kinds, and after having examined and approved the same, will forward them to the supply agent, by whom such approval will be honored.

Mr. O. P. Leland, General Ticket Agent, will continue in charge of the passenger and ticket business, also of the general accounts of the road, and to him conductors and agents are referred in matters relative to his department.

Mr. H. H. Porter, General Freight Agent, 56 Clark street Chicago, will have general supervision of all freight matters on the line.

It is important that no delay occur in the shipment of freight, and Station Agents will promptly report to Division Superintendents any want of facilities or lack of care at their respective stations.

All general, special, or monthly reports and returns formerly sent to the General Superintendent, will be forwarded to the undersigned, at Toledo, to whom also, all communications for the usual business of the General Superintendent may be addressed.

It is the hope and expectation of the undersigned that the utmost harmony and unanimity of action will prevail in every Department, and that he will keep fully informed through the proper channels, of all matters necessary to protect, or that may be calculated to protect the best interest of the Company, whose welfare is the chief consideration.

L. M. SYKES, Jr., Vice President.

NURSERIES.

The attention of our readers are called to the advertisement of Mr. Wm. Adair. He makes a specialty of dwarf pears having no less than 10,000 in a saleable condition. His selection are among the best in the West and well worth examining by those wishing to purchase. At his nursery can also be found evergreens of all kinds and ornamental shrubbery of the choicest descriptions. It is said that he has the finest roses in this section of the country.

THE HUBBARD NURSERY.—Messrs. Hubbard & Day, are now ready to fill fall orders—their stock of fruit and ornamental trees are A No. 1. They seem to have great efforts during the past year to excel in the cultivation of grape vines—having no less than 10,000 of the new celebrated Delaware, their stock of foreign grapes is also large. It is useless for us to attempt to describe all, but send for their catalogue and select for yourself.

SYRACUSE NURSERIES.—Wm. Brown Smith, the enterprising proprietor presents an extensive catalogue for those who wish to make fall purchases. He proposes to sell standard and dwarf apples, pears and peach trees; verbena and ornamental trees and shrubbery cheap, and of the best quality.

Jas. Vicks, of Rochester, so well known for his success in floriculture, offers the finest of bulbs for fall planting. Those

desirous of obtaining rare flowering bulbs and plants, will do to send him their orders.

FRANCIS BAILEY, of Newark, N. J., the well known seedsman is now ready to furnish the best of all kinds of vegetable and flower seeds. Those obtaining such from him may be sure that they are fresh and true, and will germinate well. He has also the "Green Prolific" strawberry plants for those desirous of obtaining them.

ELLWANGER & BARTY, Mt. Hope Nurseries, have sent us their catalogue No. 1, & No. 2 for 1863-4, and they really worth the examination of amateurs and professionals. They contain the most extensive lists of fruit and ornamental trees ever presented to the public, together with small fruits and beautiful shrubbery. Their Nursery is one of the largest in the United States.

A USEFUL INVENTION.—Gill's Patent for pressing fruit and potatoes into barrels for transportation is one of the simplest, strongest and most useful articles now in market for farmers and fruit packers. We have had them in Detroit for some time past, and every one who has tried them units in saying, that they are the best thing of the kind that has ever come up for public use. We have seen it used, and consider it the most effective and cheapest machine yet introduced. No farmer who has green fruit, potatoes, dried apples, &c. to pack for market, should be without one. See advertisement in our

GRUB PULLER.—This is a machine always needed in clearing up new land, and the durability, strength and speed with which it can be worked are of the greatest moment to the farmer. **BURNHAM & CO.**, of Battle Creek, Michigan, are now manufacturing one of the best machines yet known for grubbing. We understand that they will be at the State Fair for trial. This enterprising firm also have an improved Wood Sawing Machine, with a new and improved guide which steadys the saw when out and when entering the log. Price \$100 for Horse Power and Machine.

THE CITIZENS' PREMIUMS.—One of the great features of the State Fair for 1863, is the Citizens' Premiums for Running and Trotting Horses offered at Kalamazoo. This alone is one of the greatest inducements ever offered for exhibiting the qualities of horses at the State Fair. The first premium in each class is \$300; the second \$150; third \$50; the premium is made up entirely by the subscription of the Association at Kalamazoo, and is one of the many evidences that the citizens of that city, have expressed of their determination to make the affair one of the best that has ever taken place in the State. We cannot but admire the spirit that has seemed to pervade the people of that region to excel in this grand exhibition of the great Agriculture, Mechanical and Domestic industry of this State. Whoever fails to visit Kalamazoo, will miss one the best Fairs ever held in Michigan.

PICKRANT'S CATTLE POWDER—Is known to be one of the most effective and best remedies to keep stock in good condition now before the agricultural world. It is understood that it will be supplied to stock raisers at the State Fair.

DETROIT MARKET PRICES, Ending September, 15th, 1863.

Carefully corrected just before going to press, by

C. L. CROSBY & CO.,
Commission Merchants and Dealers in Fruits, and Western
Produce generally. No. 169, Woodward Avenue, Detroit, Mich.

White Wheat	per bush.	in demand	\$1 15@1 20
Red Wheat	do	do	1 00@1 02
Corn, Shelled	do	advanced, and scarce	9 62@10 64
do in the ear,	do	quiet and nominal	9 50@10 56
Oats	do	active demand	4 48@9 50
Eye,	do	unchanged	0 65@0 66
Barley, new	per cwt.	very little doing	1 50@1 75
Potatoes, Nashawnee	per bu.	active and firm	0 88@0 42
do common	do	do	28 00@28 80
Apples, 2 bbl.	"Harvest bow"	quite good supply	1 25@1 50
do dried	per bush.	nothing doing	4 50@5 00
Seed, grass	do	dull nominal	1 75@2 00
do timothy	do	new crop lower	0 66@2 00
Beans,	do	steady demand	0 62@0 75
Onions,	do	do	0 60@0 70
Turnips,	do	none offering	8 50@4 00
Cider, 2 bbl.	wanted	good request	1 15@0 17
Butter, fresh roll,	per lb.	do	1 50@2 00
firklin,	do	market flooded & dull	1 50@2 00
Peaches, green	per bu.	none in market	0 60@0 07
Venison,	do	active demand	0 11@0 13
Eggs, 2 doz.	do	nothing doing	4 50@5 00
Pork, best dressed,	per cwt.	fair demand & firm	11 00@12 50
do	do	declined	4 00@4 50
Beef, best dressed	per cwt.	advanced to do	0 60@0 07
Mutton, dressed	per lb.	advanced to	0 05@0 08
do, live	do	do	0 05@0 08
Hides, green	do	advanced to	0 05@0 07
do, dry,	do	do	0 14@0 15
do green calf	do	advanced to	0 12@0 15
do dry	do	do	0 25@0 30
Sheep Skins, each	do	do	0 35@1 00
Wool fine grade	per lb.	more active and firm	5 50@6 00
Canada coarse clean fleece	do	do	0 45@0 50
Chickens dressed per pair	do	do	0 35@1 40
do live	per pair	do	0 00@0 00
Hay, 2 ton new and old	do	do	0 00@0 00
Cheese,	per lb.	do	0 10@0 14
Corn Meal,	per cwt.	do	0 20@0 25
Coarse middlings	do	do	0 00@0 00
Salt,	per bbl.	do	0 00@0 20
Flour,	do	do	0 45@0 65
do buck wheat	per cwt.	do	0 00@0 00
Lard,	per lb.	do	0 08@0 09

WHITE WHEAT.—No. 1 white wheat is in demand at our quotations, but none of consequence offering.

RED WHEAT.—Is in fair supply but market continues quiet without sales—holders are firm.

COEN.—Is steady, but very little doing.

OATS.—Have materially declined, but market is firm at quotations.

WOOD ACTIVE.—Good Hickory, \$4.50 a 500. Beech and Maple, \$4.00@4.50; mixed Wood Beech, Ash, &c., at \$3.00@4.00. Green ranges from 21 to 30 cents lower than well-seasoned or dry. Trade brisk and much arriving on vessels.

NEW YORK MARKET.

Compiled for the Farmer from the latest New York advices to the date of going to press.

FLOUR.—Market is 5@6 better and more active, selling at \$4 55@4 95 for extra State; \$5 25@5 35 for common to good shipping brands extra round hoop Ohio—market closing quiet, with buyers generally refusing to pay the advance.

WHEAT.—\$20@21 10 for Chicago Spring; 95c@10 10 for Milwaukee Club; \$1 12@1 12 for Amber do; \$1 12@1 15 for Red Wheat; \$1 23 for Amber do; \$1 25@2 for choice New Michigan, a very elegant article, which was bought for some milling; \$1 28 for common White Ohio, and \$1 40 for good White Michigan. Market more firm with prices inclining upwards.

CORN.—Excited and fully 2@ higher, with brisk demand, 75@79c for spring mixed western, chiefly at 76c. This is owing to fast frost—we think it will advance much further. Those who have saved their crop had better hold, on it a little while.

OATS.—More active and better 55@56 for Canadian; 63@66 for Western and 66@70 for New York State.

PORK.—Steady for mess and lower for prime; \$1 75@1 12 for oil mess; \$1 62@1 13 75 for new do; \$1 0 12 50@10 50 for new prime; 14 25@16 for prime mess.

BEEF.—Steady with fair inquiry, \$4 50@5 00 for country prime; \$10 00@12 50 for repacked Western; \$1 75@11 81 for prime old mess; \$12 50@15 00 for Western, extra mess repacked.

BEANS.—In good demand \$8 90@8 40 for marrowfat—medium range at about the same.

LARD.—In fair demand and firm 10@10 1/2¢ for No. 1; 10 1/2@10 1/2¢ for steam, and 10 1/2@10 1/2¢ for kittle rendered.

BUTTER.—firm and active, the sales include Western and Ohio at 15@20c for common to prime.

CHEESE.—Slightly improved with a moderate export demand. We quote Ohio and Western at 9@10 1/2¢.

NEBRASKA:
**Its Soil, Surface, Climate and Superiority as
 a Wool-Growing Region.**

HAMBURG, Mich., 1863.

MESSRS. EDITORS.—Having a deep interest in the welfare, progress, and developement of a distant frontier territory, among whose hardy pioneers for six years has been my home, I desire to call the attention of your readers to some inducements and advantages NEBRASKA possesses as a wool-growing region.

An impetus given to Wool Culture

The events of the terrible and devastating conflict now being waged in defence of the government, and for the perpetuity of our institutions, have given a decided impetus to wool-growing, sheep raising can but prove profitable for some years to come.

Cessation of hostilities will have no immediate effect upon the price of Wool.

Should the war end—and it is a consummation though devoutly to be wished for, hardly to be soon expected—by the first flowers of spring, or in the immediate process of extinguishment, still woollen goods would for years bring high prices, and the present advanced rates of wool would not sensibly depreciate. The blighted and desolated fields of the South would have to be reduced to cultivation, and cotton culture, a new order of things in commerce and in the market for cotton would have to be created; machinery now silent would have again to be waked into the busy hum of life and motion, before the ruling high prices of wool would be seriously affected.

But without attempting to argue the question, or indulging in speculations of any sort, I think that it will be admitted that no department of agricultural industry of stock breeding promises so fair a return for a few years, as that of sheep husbandry, and the proper attention to the culture and growth of fine wool.

What is necessary to render the business profitable?

What is essentially necessary to render the business profitable is to insure against **LOSSES**—untoward and untimely losses by death and disease—a healthy and salubrious **CLIMATE**, adapted to the physical constitution, habits and wants and that shall impart vigor and strength to the frame of the animal, is necessary. To insure the greater **PROFITS**, by curtailing so far as possible the necessary and unavoidable expenses connected with the growth, bringing to maturity, and keeping of Sheep, **cheap pasturage** is desirable. Cheap lands that afford a luxuriant growth of healthy nourishing grasses, with the least possible outlay of labor and capital in cultivation, tell materially upon the expenses connected with the business, and is worthy of consideration before entering into an enterprise of the kind.

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These Nebraska possesses!

Nebraska possesses all of the above desirable characteristics for wool-growing, or I believe, has as great and perhaps to a greater degree than any other portion of the country, “subject to the Constitution of the United States”—*a healthy climate and abundant pasture.*

Surface of the Country.

The general surface of the country is high, rolling prairie, interspersed with groves, and coursed with creeks or rivers, such as the greater and lesser Nemahas, the Blue, the Weeping Water, (upon the banks of which tradition says, a great battle was fought between the powerful tribes of Pawnees and Otoes, and a beautiful Indian girl having lost her betrothed in the savage and relentless conflict, who is reputed to have been one of the noblest warriors among the young braves, was so saddened that she filled the valley with her lamentations, and along the river's edge pursued her lonely path, pouring out her bitter tears mingled with sad and plaintive notes, and calling upon the Great Spirit to take her to the new and happy hunting-grounds of the fallen brave, her lost and loved betrothed—since then the stream has been called WEEPING WATER.) The Elk Horn, Wood River, the Platte, and Siau-qui-cort. The large streams are lined with a heavy growth of timber, principally cotton wood, but including also maple, oak, walnut, hickory, hackberry, mulberry and cedar. Their shores are skirted with rich alluvial bottoms from 2 to 10 miles wide, of remarkable depth and richness of soil and covered with a luxuriant growth of grass from 8 to 10 feet high, affording excellent pasturage and abundant hay for winter consumption. The country is also well watered by springs, scarcely a quarter section being without a spring of the clearest and purest water.

The Uplands.

But as the uplands, as they are termed, or high rolling prairies, comprise the larger portion of Nebraska, they will be found generally the most desirable for sheep-breeding. These are covered with a thick mat of “prairie grass,” that does not grow so rank and luxuriant as in the bottoms, but its quality is nutritious and healthful and affords a rather better article of hay.

The Pasturage.

The pasturage is of the best quality for sheep—its vastness makes it incapable of exhaustion. For a distance of from 5 to 10 miles from the towns on the Missouri river, Omaha, Plattsmouth, Nebraska City, and Brownville, broad acres of the finest grasses for sheep pasturage can be had gratis, and many of these lands will probably be “commons” for a term of years. The tame grasses, clover, timothy, Kentucky blue grass, and the

like seem adopted to the soil, and thrive finely so far as experiments have been made.

Cheap Lands.

Lands are cheap. Improved, from one to five miles from the great channel of navigation, the Missouri river, and convenient to eligible and thriving towns, can be had at from \$3 to \$5 an acre. Better opportunities for investment in desirable real estate were never known in the history of the country.

The Climate.

The climate is healthy—the atmosphere clear and dry, and entirely free from dampness and miasma felt in many of the States, especially in England, where it is said above two millions of sheep die annually from these causes alone. This is subject of much remark, that the stars shine brighter, the sun shows, and the moon with more effulgent beauty, than at most other point, owing to the rarity and clearness of the atmosphere. Damp, chilly, foggy days are seldom or rarely witnessed. As a cough or cold are seldom engendered by either state, or felt by those predisposed to "eat up" such nuisances. Such a climate cannot fail to infuse robust health and vigor to the frame, as well as elasticity and strength to the constitution of man and beast. Our undulating hills, and the rolling surface of our prairies forbid any standing pools and exhalation of noxious vapors and miasmas, that always carry with them the invisible seeds of disease and premature death.

Experiments thus far successful.

The experiments made thus far in wool-growing in Nebraska, has thus far proved eminently successful. The sheep are free from disease, thrifter and more vigorous, and more prolific than in any of the States I am acquainted with. That climate has much to do with *prolificness* in the breeding of stock will, perhaps, be admitted, but whether it is an admitted fact or not, I have seen it demonstrated in Nebraska too often to admit of question in my own mind.

Scarcity of Machinery to work up the material not against the enterprise.

The scarcity of factories and mills to work up the wool might by some be considered a drawback, and as against the enterprise of wool growing in Nebraska. These, like all other new countries, Nebraska, is of course, for the present deficient in; but as the freight upon wool is but a trifle, it costs but very little more to market the material in New York from Nebraska than from Michigan. And if it is profitable to raise wool in Michigan upon lands worth from \$30 to \$50 an acre, and I know it is, is it not more remunerative to grow wool in Nebraska upon lands that can be had at from \$3 to \$8 per acre, and where

pasturage can be had in unlimited quantities for the mere herding.

Has it Paid?

Has wool culture, upon our present limited scale paid in Nebraska? I answer, yes! and can cite numerous instances. Hon. D. D. BELDEN, of Omaha City, one year ago purchased a flock of 1200 sheep in Calhoun County, in this State.—This season his wool, marketed in New York, brought him larger gains than all the other profits derived from his farming operations, though possessed of one of the finest farms in the Territory.

Wool growing encouraged.

Our Territorial Legislature last winter by law exempted all sheep from taxation, and 500 from forced sale or execution. Was not the Act conceived in a spirit of broad and liberal generosity?

But I have, perhaps, already trespassed upon your space. There are several other things connected with the subject, I desired to mention, but must forbear.

M. W. R.

SUGGESTIONS FOR THE SEASON.

The Country Gentleman says:—Now that the labors of harvesting have closed, a sort of new era opens to the farmer in the form of labors for autumn. A considerable portion of the labors of the farm consists of preparing for another season. Manure that has already been manufactured must be spread for winter grain; and the absorbing materials for new piles of manure are to be collected and accumulated.

COMPOSTING MANURES.

Manure in the form of compost, consisting of a mixture either with a copious amount of straw, well rotted down, or with layers of loam, turf or peat, should by all means be applied early in autumn; and the best is either as top-dressings to grass lands, especially meadows, or to new wheat fields, after the plowing has been done. There are several advantages of top-dressing meadows early in autumn. It assists in retaining the moisture of the soil which otherwise might become quite dry, and pinch the growth of the grass; it furnishes nutriment to the plants just after the half dormant state of mid-summer and they spring up with great freshness and vigor through the manure, and manure and grass together form an excellent and dense protection to the roots of the plants for winter. Partial failure often occurs in top dressing by the careless and imperfect manner in which the work is done—it is scattered unevenly and in lumps; while a portion of the grass is unsupplied, other portions are too heavily covered and smothered. The same amount of manure spread evenly over the whole surface would be of triple value; and it may be of great importance therefore to employ a hand to pass by

regular strips over the whole field, and break and scatter all lumps left by the first spreading.— Much of the facility for spreading depends on the mechanical condition of the manure at the time, the character of the component parts previously used, the degree of moisture, &c. If quite wet when spread, it will be hard to avoid some lumps; in a few days when these become dry, they may be broken or crushed with a roller, and spread by passing a fine harrow over the ground.

We have on former occasions spoken of the advantages of top-dressing wheat about the time of sowing. There is no question that in most cases this is the best way of manuring a crop in the North. The only exception perhaps, is where the soil is already quite rich, and where it may promote too luxuriant a growth of straw. Its advantages are, enriching the surface near which most of the wheat roots remain; preserving the moisture of the soil at a time when it is frequently affected by drought; giving a vigorous start to the young plants, and preventing their destruction by winter killing. We have known, in an extreme case, a moderate top-dressing of manure to part of a field of Mediterranean wheat, to give a yield of twenty-five bushels per acre, and the rest of the field which was unmanured, was so nearly destroyed as not to be worth cutting. Several good farmers, who have long practiced this mode, have found it usually to increase the crop about eight bushels per acre. Another, and by no means the least advantage, is the assistance it gives to the young clover plants, as insuring their germination—making a difference in extreme cases equal to doubling the amount of seed.

In preparing manure for another year, an abundant supply of absorbents is important. They must vary with circumstances; where straw is abundant it answers a good purpose if time can be allowed for it to become well rotted down.— The facility with which it may be used for litter, and being always easily spread in cold weather, it is most conveniently used. Turf answers a good purpose, but cannot well be employed when frozen hard. The same remark will apply to muck or peat, if it has been well dried. In fact, peat is of comparatively little value when used wet. It will hold, like a sponge, nine-tenths of its weight of water; and hence when saturated, cannot absorb the liquid parts of the manure. Every care should therefore be taken to have it well dried. It should be dug out of the swamps, if practicable, in summer, or early in autumn, and the present season is therefore the time to secure a large supply. A mistake is often made in throwing it in large piles on the ground, where it sucks up like a sponge, the water from the soil beneath. It should, therefore, be thrown upon a platform

made of poles, brush, slabs, or plank, and if the heaps cannot be covered with boards or thatch, they should be beaten smooth with a spade, so as to throw off the rains. This may appear to some to be much unnecessary labor, but it will amply repay all the trouble, and increase many times the value of the materials used.

Farmers who have manure on hand too coarse to be well applied in its present state, should immediately form compost heaps. This may be done, in many cases, in or near the fields where it is wanted, and thus save the labor of drawing a part of the materials into the barn-yard and then back again into the fields. Fence corner turf, and the washings of ditches and fields, form an excellent material. The latter may be found abundantly the present year after so many heavy rains, and compost heaps may be made near any large deposit. Such washings being entirely free from stones and easily shoveled, besides containing considerable rich matter, are well adapted to this purpose. The thinner the alternate layers of manure and earth, as the heaps are built up, the more perfect and thoroughly mixed will be the compost.

WEEDS.

We lately observed one of our best farmers going thro' his crop of corn and clearing out all the remaining weeds, which had escaped his earlier cultivation. As every plant would soon have ripened its five hundred or a thousand seeds, and greatly increased the labor of eradication another season, the economy of this operation may be well conceived. Immediately preceding or soon after a rain, it is advisable to harrow all stubble ground that has not been seeded down, or which may be intended for plowing. The weeds will soon start and form a green manuring crop which will enrich the soil when turned under. The pulverization of the surface by the harrowing, also improves the surface and renders the subsequent plowing more perfect. Crops of turnips, beets, and carrots are yet to make their best growth; they should, therefore, be kept constantly cultivated. Nothing can have a worse appearance than to see numerous weeds thrusting themselves above the rows of these crops. No true farmer can admire the taste which induces some land owners to allow their fences to become ornamented with elder bushes, briars, nettles, horse-thistles, burdocks, mulleins, &c., and wherever they exist, the present occasion should be seized for their utter extirpation. Briars, if cut low during the present month, are much checked in vigor, if not killed; but it may be best to remove such fences as are not line fences a few yards, and plow up and cultivate the old line of weeds. To clear out the ox-eye daisy, plow it under deeply

during the present month ; dig up or otherwise destroy every plant which appears before winter ; plant with corn another season, and keep it well and frequently cultivated and hoed clean. If a good manuring can be applied, follow with another well cultivated corn crop, and seed down with a grain crop, sowing the clover seed heavily. The few remaining plants after this treatment may be eradicated by hand, or by a repetition of the same course.

Other work for the season will consist in threshing grain, always securing the straw well, both for litter and feed; commencing the fattening of animals; repairing fences, gates, and buildings; selecting the best and perfectly clean seed wheat; underdraining portions of land too wet to drain in the spring; drawing off stones and stumps; clearing meadows of all kinds of obstructions to the mowing machines, such as rocks, bushes and stumps; carefully house all farming tools, first cleaning them of dirt and brushing them up, and seeing there is a place for every one and every one in its place.

Special Manures.

A great deal is said by chemist and men of science in relation to the superior value of chemical science as connected with the agricultural art. Chemistry and Physiology, in conjunction, have, it is true, accomplished much for agriculture, and as the principles of vegetable reproduction become more fully understood, will no doubt effect a still greater amount of good. Mere theorists and sciolists, however, are of little benefit to the cause ; their speculations and assertions tend rather to perplex than enlighten, and as novelty constitutes the predominant element of their speculative philosophy, they unfortunately become popular among those who can least afford to be duped by them. But this is one of the evils which, in time correct themselves. True science never produces disastrous results—it is the pioneer of progress, and as such must be welcomed by every discriminating mind. It has already accomplished much in almost every department of productive industry, and its light now streams its rays over the innumerable paths of effort and toil which man pursues. But of this fact—obvious as it is to the intelligent mind, many are wholly unconscious. The chemist tells us that in order to constitute an efficient fertilizer for the reproduction of any specific plant, we must use some of the various mineral salts, such as the salts of ammonia, potash, soda, lime, silex, iron, sulphur, &c. These are doubtless of great importance, for the analysis of all cultivated crops demonstrates the indispensableness of these articles in the formation of living tissues.

Lime is necessary to the formation of the corn and wheat plants ; it also enters in greater or less quantities into the texture of most vegetables, as do also the salts of soda, ammonia, potash, sulphur, and other minerals, all of which exist in the soil, and when exhausted by growing crops, may be supplied by the application of *humus* or earth. These mineral elements are certainly indispensable to the healthful development of vegetables, but by them alone fertility can never be effected. The English member of Parliament who predicted that the time would come when the farmer would carry to his field in the pocket of his vest a sufficiency of manure to fertilize an acre, had certainly a very exalted opinion of the efficiency of concentrated fertilizers. The same opinion seems to be participated in by certain individuals in this country.

But after all that can be said in commendation of mineral elements, the farmer should not rely exclusively upon them ; he must, in order to secure the fertility of his lands, provide an adequate supply of decayed vegetable matter,—decayed straw, muck and animals excrement, all of which are of vegetable origin, and replete with the very mineral substances which, in an abstract condition, are sold under the generic appellation of special fertilizers.

An attempt, however to feed plants on lime, the salts of iron, ammonia, soda, sulphur, potash, &c., would probably result much in the same manner as an attempt to keep up the static equilibrium of the animal system by a food composed of pepper, salt, mustard, vinegar and other similar articles without a supply of beef, pork, bread, or some other alimentary substance, essential to the support and maintenance of life. Poudrette and guano are concentrated manures of an animal origin ; at least in a mixed sense they are so, and when analysed are found to contain many of the salts which the scientific hold to be most essential to the growth of vegetable life. Poudrette is unquestionably a most valuable fertilizer. Experiments conducted with the utmost care in regard to accuracy, and on almost every description of soil and variety of crop, through a succession of eight years, have convinced me that a good article of poudrette is one of the most economical fertilizers the farmer can employ. To capacitate an acre of ordinary soil for the production of sixty bushels of shelled corn, forty-three pounds to the bushel, will require at least thirty-six tons of green cow manure, probably much more. Now, the same soil may be and has been made to yield this amount of sound and perfectly well matured corn, by the application of four hundred pounds of poudrette ! Here is an important difference, not only in the quantity of the fertilizing article

and its cost, but also in the expense of applying it. But there is another point to be considered here; the cow manure is more durable in its effects, and will continue to operate beneficially for years, whereas the poudrette acts temporarily, and is mostly if not completely exhausted by a single crop. This, however, is no argument against its use.—*OLD FARMER, in Germantown Telegraph.*

Indigo oil to improve your hill land. Don't hesitate a moment. Dan For the Michigan Farmer.

"By their fruits ye shall know them."

Jones vs. Brown.

BY CHARLES B. HOWELL,

"By their fruits ye shall know them" cannot be said of all pieces of soil, that is, as to know their own absolute qualities, for they are too often perverted. The soil may be capable of producing prodigious crops, but if indolence allows weeds to choke out legitimate plants, he would not be an impartial observer who would judge by the scrawny, sickly plants in the market grown on such soil, the nature of the soil itself. All who have had opportunities of seeing and judging, doubtless are acquainted with many a farm which has passed through as many vicissitudes as did Dave Crockett, or has Barnum.

M. Brown purchased a farm which had long been noted for its proverbial habit of yielding according to the highest scripture "fold." For a year or two Mr. Brown raised good crops. But after that they gradually deteriorated from year to year. The wise-acre owner thought the rain must be washing away the rich particles of the soil, leaving only the unproductive portions. He said that like people, land would sometimes degenerate, and that he had that very kind. He said it was "just his luck" to have a smile or two from fortune, and afterwards he allowed to only view the clouds which veiled Fortune's sunny face. But if Mr. Brown had looked things equally in the face, and dispelled the illusions that filled his mind, he would have seen that the "clouds" that obscured fortune were immense quantities of manure that had accumulated from year to year in his capacious barn-yard, in the rank growth of weeds that stunted his corn and potatoes; in the swine that rooted at will in his clover meadows after haying, and the sheep that knewed so closely that same clover; in the low, rotten fences,—in short, Mr. Brown would have seen the cause of those "clouds" in the results of his own sloth, ignorance and carelessness.

When asked to subscribe to an agricultural journal, Mr. Brown refused. He said that "book farming" only made men pay out money in trying wild experiments, with as much chance of getting a return as a man would be to make a bet

on the probable place the lightning might strike during the next thunder storm." Besides, said he, "if one gets readin' these yere papers, it makes him neglect his work. The writers always try to make their pieces as interestin' as they can, and one is so apt to remember what is nice and spicy, and neglect to take advantage of the suggestions in the dry parts, that discuss scientific farmin', and all that."

After a time Mr. Brown sold his farm, at a considerable sacrifice, having given up the idea of making even a living from it. The purchaser was a man of thorough habits, and had in his library a fair quota of agriculture works. Agriculture journals also helped to make up the family resources for reading.

Mr. Jones, the purchaser, found nearly a fortune in the barn-yard accumulations, and he and his stalwart boys found plenty to do in hauling it to those fields seemingly the most barren. He was not discouraged because the fences were poor and the soil unproductive, for there were no filmy illusions over his sharp eyes. His sagacious judgment took in at a glance the unnatural disease the farm was laboring under, and the remedy it needed to effect a restoration to its pristine status. He saw the elements of a valuable piece of land in his sorry looking farm, and his guiding the helm in time showed that it was not the *inanimate* member of the partnership which almost rendered nugatory the saying, "By their fruit's ye shall know them," but the man who acted upon it understandingly.

Pontiac, Aug. 28th, 1863.

Cross Plowing.

Opinions differ in regard to the expediency of cross plowing sward lands—some contending that where the sward is comparatively light, such as is often found on old pastures or fields that have been long run out, cross plowing assists in the after culture of the crop to a much greater extent than the cost of the cross plowing. We have thought this to be true in our own practice on such lands. But there is another point to be considered, especially when heavy sward land are to be wrought. We will state some of the reasons that occur to us.

Unfermented vegetable and animal matters, when buried in the soil as aliment for crops, ought not to be exposed to the action of the sun and winds until they have completely decomposed. The gaseous products eliminated by stable manure and other decomposable products, while, in a fermenting state, always ascend, because they are specifically lighter than atmospheric air. They consequently enrich the soil by which, if properly inhumed, they are fixed, and thus con-

tribute to the sustenance and support of plants. If fermentation takes place on the surface, as we think it will, in some degree, under favorable circumstances, the gaseous products will be diffused and lost. The quantity of actually soluble matter contained in an acre of well set sward land is much more considerable than many would imagine.

An English writer has ascertained that a vigorous sward, inverted in the latter part of summer, after the hay has been cut, or in the spring, before the grass has attained much growth, contains not less than thirty tons of vegetable matter to the acre! This, when resolved to humus by a well graduated decomposition, will afford a highly salutary aliment to vegetation, and if permitted to decompose beneath the soil, will essentially contribute to its productiveness. We make these remarks, bearing in mind all the time that decomposition is comparatively slow on the surface, and, also, the doctrine and practice, of some English farmers and writers, that nothing is lost in surface manuring. In that climate there may not be. In ours, under the scorching suns that occur even in May and September, we firmly believe it would be considerable.

When, for the sake of a more thorough tilth, it is thought advisable to cross plowing, the first plowing should be deep, and the second, or cross plowing, shallow, in order that the pulverization, which is the object sought in the latter plowing, may be secured without disturbing the mass of vegetable matter turned down by the first. If the second plowing be as deep as the first, the furrow slice, or sward, will be cut and brought to the surface, greatly to the annoyance of the workmen, and perhaps to the soil and crop. In pulverizing the surface of recently plowed green sward lands, the cultivator, or horse hoe, is far preferable to the plow. It pulverizes thoroughly as far as its teeth penetrate, and does not go so far below the surface as to disturb the sods.

It is the practice in some sections of New England to plow the grass land intended for corn the next year, soon after the hay crop has been removed in July or August, allowing a few days for a new crop of leaves to start out after the grass is cut. It is thought by some with whom we have conversed, that the practice is an excellent one, though no reasons were given besides the one that the corn crop was much better than when the land was plowed late in the fall, or in the spring. If such is the fact, it will not be difficult to assign a reason or reasons for it.—*New England Farmer.*

Sow Lettuce for fall crop, thinly, and in deep and very rich ground.

Sowing Grass in the Fall.

A correspondent of the Germantown Telegraph who is favorably impressed with it, says:

"Experience has shown that the most judicious, and, ultimately, most economical method of laying land to grass, is to sow the seed immediately after corn or potatoes, or some other weeded crop, and without any accompanying crop. This insures a ready and vigorous germination, a rapid and healthy development of the youthful plants, and a renumerating crop, and secures a sustained production which can be effected so readily and cheaply in no other way. In examining carefully fields managed in this way, we shall find that the plants have a much broader expansion, and firmer grasp upon the soil, than the roots of the same kind of plants on lands which have matured a crop of cereals.

By cleansing the surface of lands after taking off a crop of potatoes, for instance, thoroughly pulverizing it by harrowing, having previously applied, broadcast, a few cords of fine compost, or old, well-rotted stable manure, and sowing herba grass, red top, and clover, allowing about double the quantity usually sowed, and covering it by means of a suitable harrow, followed by the roller—we shall be sure to secure a good crop of hay the next year, which exceed in value the grain which the soil would have produced, to say nothing of the exhaustion of the soil which the latter would necessarily effect.

If we examine grass plants growing among wheat, oats or barley, or indeed with any dry crop, we shall find them exceedingly weak and spindling; the foliage, when there is any, pale and thin, and the whole appearance of the plant indicating imbecility and disease. Such is not the case where the seed is sown by itself. It then starts vigorously, comes forward with a rapid and sustained development, and is not subject to those sudden and fatal checks which militate so powerfully against their advancement when shaded by grain."

An Out-Door Cellar.

It is very unwise to store a large quantity of vegetables in the cellar of a farm-house, even if it is of sufficient capacity. In the later part of winter there will be some decay, and nothing can be more detrimental to health than living over a mass of decaying vegetable matter. But few cellars are large enough to hold the products of the farm that requires winter storage. As we devote more attention to the economical feeding of stock the necessity of good root cellar will be felt more seriously. Carrots, beets, parsnips, cabbage, and the like, require cellar room. A sandy hillside is the best place for making a cellar, as in this situation good drainage is secured as well as

easy access. A good cellar, however, can be made in any place where the water will not be within three or four feet of the surface. Especial pains must be taken to secure good drainage. Dig down as far as drainage will allow, and throw the earth back, to be used in banking up. If rough stones are to be had, they are best for the walls; if not, posts and planks will answer. A strong ridge pole is necessary, which must be supported by posts. Bank up the sides with earth, and plank the roof, and cover with straw or leaves, over which rough boards, or something of the kind, must be placed to prevent blowing off. An easy entrance should be made at the front by digging down the earth in a gradual slope; and as this part will be exposed to the weather, it should be made double; and if of boards, filled between with straw. Where stone is used a space for air is sufficient. Perhaps some of our readers who have had experience in the building and use of out-door cellars will give us the benefit of their knowledge of the subject.

Difference between the Loyal and Disloyal States.

The *New York Times* gives an outline of the difference between the North and South in agricultural and also in the advantages of War:

By referring to the census of 1860, we shall find that the total population

In the loyal States was,	23,846,000
In the disloyal States,	7,993,000
White Males in the loyal States,	18,817,000
White Males in the disloyal States,	2,375,000
Colored Males in the loyal States,	637,000
Colored Males in the disloyal States,	1,689,000
Horses in the loyal States,	4,447,000
Horses in the disloyal States,	1,408,000
Mules and Asses in the loyal States,	348,000
Mules and Asses in the disloyal States,	561,000
Cattle in the loyal States,	16,969,000
Cattle in the disloyal States,	9,715,000
Sheep in the loyal States,	18,214,000
Sheep in the disloyal States,	4,229,000
Swine in the loyal States,	10,295,000
Swine in the disloyal States,	13,167,000
Bushels Wheat in the loyal States,	144,416,000
Bushels Wheat in the disloyal States,	25,557,000
Bushels Indian Corn in the loyal States,	594,374,000
Bushels Indian Corn in the disloyal States,	229,917,000
Bushels other Grains in the loyal States,	210,354,000
Bushels other Grains in the disloyal States,	81,149,000
Cash value of Machinery, &c., in loyal States,	\$170,187,000
Cash value of Machinery, &c., in disloyal States,	\$75,629,000

In other words, the military resources of the North to the South are, in male proportion, three to one, in horses, three to one; in sheep four to one; in swine, more than equal; in wheat, five to one; in Indian Corn, two to one; in other grains, seven to one, and value of machinery, implements, &c., two to one.

Our navy, besides the protection it has afforded our commerce upon the high seas, has pretty effectually blockaded the Southern and Gulf coasts, has captured Port Royal and New Orleans, and accomplished much in opening the Mississippi River. Secession has been prevented in Maryland and Delaware, Kentucky and Missouri. West Virginia has been freed from rebel domination, and organized into separate Union State. The Potomac River re-opened, the Eastern coast of North Carolina restored to the Union, a valuable depot for naval and military stores established in South Carolina, Fort Pulaski in Georgia, and Fernandina and St. Augustine in Florida, re-taken and re-occupied. In the West the rebels have been driven entirely out of New Mexico, Arizona, Southern

Kansas, Missouri, North Arkansas, Kentucky, three-quarters of Tennessee, and one-half of Mississippi. The amount of territory thus re-conquered and re-occupied by the Union armies is more than two hundred thousand square miles. The country so re-conquered and re-occupied is as large as Austria or France, or the Peninsula of Spain and Portugal, and twice as large as Great Britain, or Prussia, or Italy.

But the most important thing of all is the re-opening of the Mississippi River, from its sources to its mouth. In addition to the commercial importance of this great highway and natural outlet of the products of the Western States, its possession by the Union forces cuts rebellion completely in two, thus separating and isolating the enemy's forces and territory west of that river, which, in a military point of view, is worth to us more than twenty such capitals, like Richmond.

Potato Starch.

Starch made from the common potato furnishes an excellent substitute for arrowroot, as a wholesome nutritious food for infants. It also makes a good cheap pudding for the table, if cooked like sago; and as it has not the medical properties of arrowroot, it is much to be preferred as an article of daily food, except for children who are subject to diarrhoea or summer complaint. The process of making the starch is simple and the time required so short as to put it into power of every one having the means at hand. Wash any quantity of potatoes perfectly clean, and grate them into a tub half full of clean cold water; stir it up well; let it settle, and then pour off the foul water; put the grated potatoes into a fine wire or coarse hair sieve; plunge it into another tub of clean cold water, and wash the starch through the meshes of the sieve and throw the residue away; or wash it again if the starch remains in the pumice; let it settle again, and repeat this process until the water comes off clear; scrape from the top any remains of the pumice: then take the starch out, put it on dishes to dry in a warm room, and it will be fit for use immediately. When wanted for use, mix as much as may be needed in cold water, and stir it into boiling milk, or water if preferred, and it requires no further cooking. It also makes a stiff and beautiful starch for clearing thin muslins and laces.—*Boston Cultivator.*

DRYING PEACHES WITHOUT PEELING.

A correspondent, says the *Country Gentleman*, who has tried the plan of drying peaches mentioned below, to his great satisfaction, requests us to republish it for the benefit of our readers:

The *furze* is removed by immersing in lye, made by boiling wood ashes in water, to a tolerable strength. The lye should be warm, but not so as to cook the peaches, which are rubbed in it awhile, and then washed in clear cold water. Every particle of furze will be removed, and only a thin skin remain—they can then be cut and dried in the usual manner. They thus lose nothing of their sweetness by peeling, and are said to be of the best quality for all cooking purposes.

HORTICULTURE.

For the Michigan Farmer.

AMERICAN POMOLOGICAL SOCIETY.

Grapes.

The discussions of the Society upon the Grape elicited much valuable information; and as much interest appears at the present time to be felt in our State, upon this subject, we have warranted in indulging in a somewhat full report.

MAXATAWNEY.

Was commended by Reid, of N. J.; and James, of Penn., remarked that the original vine has been left to grow wild, and clammers over a plum tree; notwithstanding which the fruit maintains its size. It is of a bronze color when ripe. It matures about the same time as Isabella.

The President raised a question whether it will ripen in the North.

[The writer chanced to be on the "Tasting Committee," and would remark that the specimens shown were then nearly or quite ripe (Sept. 16th), and were, in appearance and quality, worthy of high praise. It must in justice be added, however, that they were grown in the city of Philadelphia, and upon a south wall.]

LOGAN.

Parsons, of N. Y., asked—"Has it done well anywhere except in Ohio?"

Bergen, of N. Y., had fruited it one year—bunches not large and not a good settler—a good, sweet grape, about as early as Hartford Prolific.

Goodale, of Maine, had succeeded well with it,—found it the hardest grape he has—lays down all his vines. He found it somewhat inclined to overbear. Flavor more brisk and vinous than some others.

Risley, of Connecticut, found it not as early as the Hartford Prolific, but variable. The berries much scattered on the bunch.

Reid, of N. J.—"It is apt to rot in my grounds. Its bunch is small, the berry small, and the foliage small. It is a pleasant, sharp grape. I like it."

HARTFORD PROLIFIC.

Was very fully discussed; and although all agreed that it was only passable in quality, and the berries inclined to drop as soon as ripe, it was found universally successful, both at the north and at the south, as to hardness and productiveness, and withal, so early, that all seemed disposed to overlook its defects, and it was generally conceded to be one of the most desirable for general cultivation—in fact, as remarked by Hooker, of N. Y., "is the grape for the million."

ALLEN'S HYBRID.

Was introduced by Hooker; and some of the members expressed doubts whether it is really a hybrid. It failed to elicit any decided commendation.

CUYAHOGA,

Was called up by Bergen, of N. Y.; and in reply to the question, Elliott, of Ohio, stated "That it originated in Ohio, but I have always had doubts about it maturing with us. Here (Boston) I don't think you could mature it. It is a greenish, white grape; branches compact and close, and where it could be ripened, it would be a very good grape. Three years out of five it has not ripened where it originated. It is a strong grower, and in habit it is strictly a fox grape."

Others were disposed to believe it a seedling from some foreign variety.

MOTTLED.

Mr. Elliott, remarked—"There is grape from Kelley's Island, Ohio, which is called the Mottled. The berries when partially colored, are mottled with green and red. As they mature the green disappears, and becomes a dull red, while the red becomes a dark purple. It is just now coming into eating condition."

DELAWARE,

Was introduced by Reid, of N. J., to elicit the opinion of the Convention respecting it.

Some cultivators had been very successful in securing strong

growths but such seemed to be the exceptions. In hardness, productiveness and high quality, it is well understood; and by common consent, these questions were not raised.

J. M. Earl, of Mass., inquired, "what is the character of the Delaware in relation to mildew?" It had mildewed badly with him.

Reid, of N. J., had found this one of his difficulties, but considered it vigorous when up.

Hooker, of N. Y., gave it his unqualified recommendation, so far as Rochester was concerned; considered it a small grape, but perfect; and altho' the bunches are small, they make up in number what they lack in size.

Prince, of N. Y., urged his opinion, so long entertained, that it is the seedling of a foreign variety; and like all others of that class unadapted to open air culture in our climate. In this opinion he seemed to stand alone.

[The discussion was here interrupted to admit some remarks by Mr. Richard McCormick, from the Department of Agriculture, at Washington; in which he explained the position of that department with the Government, and the Agriculture and Horticulture of the country, and asked for the confidence, this support and the counsel of the people.]

After the conclusion of these remarks the society resumed the discussion of Native Grapes,

NORTHERN MUSCADINE.

"Smith, of N. Y., I would like to inquire if Northern Muscadine will not bear an additional star or two. With us it does finely, and we think very much of it."

Prince, of N. Y., it is of fair flavor on dry soil, on moist soil it is absolutely flavorless.

Hyde, of Mass., had taken up and given away what he had, and was glad to get rid of them so—considered them worthless.

J. M. Earl, had found them to drop worse than any other grape he ever knew. "It was disseminated by the Shakers, at Lebanon." They afterwards found that the Shakers, at Harvard, had the Early Amber; and they have got that, and substituted it for the Northern Muscadine. It is a much superior grape."

REBECCA.

Parsons, of N. Y., inquired how Rebecca has done this year.

Elliott, of Ohio, had found it as hardy as any other, and regarded it as one of the best.

Hovey, of Mass., I can only say, that I consider it the best grape in the United States; but whether it will become as popular as some large and coarse looking grapes, is a question that remains to be decided. I believe it is just as hardy as the Isabella.

President—"I saw, at Salem, recently, a Rebecca vine that afforded me very great pleasure. It has a large quantity of grapes, perfectly free from mildew, and in good eating condition now. I am inclined to think that, when the vines are young, they are liable to mildew, much like the Delaware; but when they get considerable strength, they are vigorous enough, and pretty free from mildew. It has been so with me."

Reid, of N. J., considered it perfectly hardy, and superior to all the white grapes except the Maxatawney.

CREVELING.

Was called up by Hyde, of Massachusetts.

Prince, of N. Y., "It is the best we have. A large purple grape. After testing all the American grapes, I find that superior to all other grapes." (Mr. Prince, the reader will recollect, insists that Delaware and Rebecca are seedlings of foreign varieties.)

Hooker, of N. Y., thought we had no other grape of its season so good. It ripened with Hartford Prolific and I thought it quite superior. The vine is a very free grower, and uncommonly hardy.

Elliott—"We have fruited it, in Ohio, and are satisfied that it is one of the best early grapes. We had regarded the Logan as the best, but we have decided that it is better than the Logan."

Downing, of N. Y., was much pleased with it.

UNION VILLAGE.

Was inquired after, by Hovey, of Mass., who had found it as early, or a little earlier than Isabella, with very handsome, large bunches. Specimens exhibited as Ontario are identical with this.

Prince, of N. Y. "It was re-issued by Mr. Reed, of Hamilton, Canada West, as the Ontario. It is just about as hardy as the Isabellas, and about the same quality."

Elliott—In Northern Ohio we consider it unworthy of cultivation.

TO-KALON,

According to Prince, of N. Y., this grape originated at Lanesburg. He thought it a better grape than Isabella.

Reid, of N. J., had found it a shy bearer.

Lyon, of Mich. "I inquired about it, two years ago, at Philadelphia, and the objection was that it rotted badly. With me it has never rotted or mildewed, but proves as hardy as any other variety, unless it may be one or two. Last year when almost every other variety failed throughout the country, I, at least had a very large crop, and the bunches were beautiful. In ripening, they put on a beautiful, mottled appearance at first, which of course disappeared finally, when fully ripe."

Downing, had found it to drop badly.

President, had given it up entirely.

PERKINS.

Hovey, of Mass., stated that the Perkins is a Massachusetts grape, about ripe now; a very fair berry; and likely to prove a very good grape.

Hyde, of Mass. "I saw the original vine, or a slip from it, in Bridgewater. It was raised by the Perkins family. The vine had an abundant crop, but I was not impressed with the quality of the fruit. I hardly consider it worthy of cultivation."

Downing—It is just about as good as Northern Muscadine.

RODGERS' HYBRIDS.

The attention of the convention was called to these, by Mr. Ives, of Mass. These seedlings of which there were a large number are the results of crossing the Black Hamburg upon a wild native of New England, and the size of the berry and bunches, and the vigor of the plants, are such as to astonish all who have had the opportunity to examine and test them; while, in quality, several of them promise to take rank among the best of our hardy varieties.

Mr. Rodgers, the originator, has unfortunately suffered them to be disseminated under numbers only, which is greatly to be regretted, as a wide door is thus opened for error.

It is stated that Mr. Rodgers has another batch of hybrids, produced by crossing other foreign sorts upon these seedlings, which give indications of hardiness and freedom from mildew, and which are being watched by horticulturists with much interest, as illustrations of another step in a direction in which theory alone fails to indicate the probable results.

DIANA.

Was named by Hooker, of N. Y., with the remark that it failed last year. He farther remarked. "I do not feel ready to endorse all that has been said in praise of that grape. When well ripened, in a good exposure, I have found them surpassed by no grape for real excellence; but yet, with me, it is liable to the objections of making a great deal of miniature wood, and a great many buds in the spring fail to come out, and produce anything like good bunches of fruit; and the bunches themselves are seldom perfect."

Parsons, of N. Y., and Reid, of N. J., confirmed the experience of Mr. Hooker.

OPORTO.

Prince, of N. Y. "I made an examination of some Oporto grapes some two weeks ago, and found the bunches small; fruit medium size; very austere—an inferior fox grape. It will make wine, but almost any of the fox grapes will make better. The port wine made at Oporto is made of half elder berries and half grapes."

President—"It is a fact that the elder berry makes a fair wine, resembling our Port.

Lyon, of Mich. "The Oporto was introduced into our vicinity some years ago. It stood the severe season, with us, a year ago, better than almost any other. I cannot say much for its quality as a table grape, but for its hardiness with us I can vouch. It matures quite well in any of our seasons, and is very productive."

Downing, of N. Y. "Will any one eat the grapes after it has ripened?"

Hyde, of Mass. "I should prefer not to eat many of them myself."

LYDIA.

Elliott, of Ohio. "I would call attention to the Lydia. It is a large, white grape, about the size of the Catawba, raised on Kelley's Island; the bunches very round, color a greenish white, very little purple, and ripens about the time of the Delaware."

LOS ANGELOS.

Prince, of N. Y. All the grapes in California, represented as foreign, are one variety, and all the wines are made from one grape, under various processes; and this grape is called the Los Angelos. In California, naturally, there is no good grape.

BLACK GRAPE OF SONORA.

A grape sent from California under this name was stated by Barry, of N. Y., to be identical with Zinfandel.

MAMMOTH CAPE.

Houghton, of Penn., called attention to a grape grown in Europe, under this name. A very large, delicate grape, from the Cape of Good Hope, and said to be adapted to out of doors culture, in a dry climate.

YEDDO, OR JAPAN.

This grape, (which had not yet fruited in this country,) was said, by Parsons, of N. Y., to grow very much like the Delaware. It promises to be a strong, hardy grape.

MARY.

Elliott, of Ohio. "I would name the Mary—a seedling native, grown in Ohio, not yet sent out. Berry of medium size, loose, long bunch, color greenish white. Ripens with the Isabella. Quality superior."

BRACKETT'S SEEDLING.

Parsons, of N. Y. "I would name Brackett's Seedling. I tested it year before last, and it struck me as a very fine grape indeed, and more nearly approaching Black Hamburg than any hardy grape I have seen. Whether the wood will stand the winter, or not, has not been tested. It is a seedling of the Union Village.

President—"I have heard a very good opinion of the grape; and the only question about it is the one that comes home to us. Is it early?"

ADIRONDACK.

Mr. Barry, of N. Y., presented a grape from J. W. Bailey, of Plattsburgh, Lake Champlain, called the Adirondack.

Elliott, of Ohio, from the committee on New Fruits, described it as follows: Bunch large, compact; berries large, round; color dark purplish red, with a blue bloom; seeds large; flesh greenish white, soft, not perfectly ripe, but promises excellently well.

Plymouth, Sept. 1869.

T. T. LYON.

Tree Wash.

In early spring and after fruiting we should look well to the cleaning of the trunks and larger branches of fruit trees. The old style of white washing is not fair treatment, for although its immediate effects may be beneficial, the interstices of the bark becomes filled in degree with the insoluble carbonate of lime, and this interferes materially with the after-growths of growth, lessening the endowments and excesses actions, and the bark soon becomes again as badly condition as before.

Tree washes should be soluble, so that they will eventually be removed by rains; thus oil soap, if free from resin, may be used with advantage. Potash should never be used, as it frequently injures the cleaner and more delicate portions of the bark, and it changes so readily to a carbonate, as to be washed off, before it decomposes the ova and cocoons of insects, lichens, mosses etc., and it will not remove the saely insects from the surface of pear trees, unless used at so great a strength as to injure the surface of the bark itself.

The soda tree wash we have so frequently recommended; is preferable to all others, and may be thus prepared:—Heat sal soda red hot in an iron vessel; to do this the vessel should be imbedded in, not over, a hard coal fire; this will drive off the water and carbonic acid which it contains rendering soda caustic. One pound of this caustic soda, added to one gallon of water, may be applied to the trunk and larger branches of trees without injuring them. It will remove the saely insects from the bark of dwarf pear trees. Applying the wash one day, rub such as have this insect upon them, the next day, with a woollen cloth, and the barks will be perfectly clear. This wash may be applied to all trees with a mop or brushand, if again applied at mid summer to the larger portions, trunk, etc., the trees will be materially benefited. Where a portion only of the trunk of a plum tree is cleaned by this wash, it will increase in diameter more than the parts above and below the washed portions. This wash is worth all it costs as manure; it necessarily will find its way to the soil by the action of rains, dews, etc.—*Working Farmer*.

THE PEAR TREE:

Its Pruning and Management.

BY F. A. NAUTS.

The able articles of this writer for the Working Farmer, are well worthy of the attention of all who possess a taste for horticulture, and who wish to thoroughly understand the pruning and management of fruit trees.

NATURAL VEGETATION.

The kernel fruit trees, less capricious than the pit or stone fruit trees, with regard to the regularity of crops, are slower to set to fruit; left to themselves, they either would set very late, or would not set at all; good kernel fruits are, more than all others a conquest for human industry; a conquest that man only keeps up by unremitting care. The Pear Tree is, with regard to number, variety and the precious qualities, the first of all kernel fruits. Let us consider its peculiar mode of vegetation.

Each branch of the Pear tree is terminated by a woodbud; this bud opens in the spring to form a branch alike in every way to that which has borne it; the branch left to itself, continues to grow also by its superior extremity; all the buds of each year are wood buds, without exception.

Let us follow a three year old branch the destiny of these buds, beginning with the last; the traces *a a* (Fig. 1) divide the branch into three



8d section. 2nd section. 1st section.
FIG. 1.

A—Traces dividing the branch into three sections.
B—Twigs opened from wood-buds, immediately below the origin of the third section.

sections; each section represents the vegetation of one year. The buds of the third section have undergone but little apparent modifications in the annual course of their vegetation; whatever may be their ulterior destination, for the moment they only represent wood-buds. Those of the second section are more sensibly modified; however, we do not perceive one that has become a fruit-bud; some only are in course to become so, as this is a very slow transformation in the Pear tree. We further see, towards the end of the second section, several productions, *b b b*, alike in every way to the first section, except in the dimensions;—they are twigs that have opened from wood-buds; they are placed immediately below the origin of the third section; they followed before its development the terminal bud, from which section it is-

sued. Lower, the place of the inferior buds is scarcely visible; they have not yet opened; they exist, however, but in a state of dormant vegetation; the sap, too powerfully attracted by the twigs above them, has passed by without their being affected by it; the last placed near the heel are altogether obliterated. Those of the first section have followed exactly in the same course; only they have vegetated a year longer, the twigs are stronger, and some have themselves already unfolded twigs; the fertile buds are more advanced towards the time when they will bear their first flowers, although that time has not come yet; the lower end of this section and branch is altogether naked; we cannot distinguish any inferior buds, which, when this section was in a state of twig, were seen as apparent as those with which the third section is now furnished the whole of its length. Such are the facts as which at first offer themselves to us. A more attentive observation will show us, besides each fruit or wood-bud, an underbud, often indistinct, but very tenacious, and which becomes a very vigorous twig in a very short time, when its companion perishes or is cut away. This precious resource of a dormant underbud, which can always be awakened at will, only exists in the kernel fruit trees;—these trees have also another resource, the heel buds are only obliterated in appearance; they are always ready to pierce the bark, when by a short pruning the sap is forced to take its way towards them.

After having verified this constant march of the vegetation of the Pear tree, we are enabled to judge in what it is opposed to our views directed towards the production of fruit; and we can discover by what means it will be easy for us to unfold the fruiting productions; we do not as yet see any well formed on the branch on which we study, (Fig. 1); this branch is too young.

FRUITING PRODUCTIONS.

Fruit-buds take sometimes more than 4 years to pass from the state of wood-buds to that of a fruiting production or fruit-bud. Fig. 2, represents a fruit-bud come to its perfection and ready to open; the wrinkles of its support are the traces or remnants left, by the footstalks of the leaves which have protected it during its existence, without which it would not have been able to attract the necessary sap for its growth. All wood-buds, whatever their place on the Pear tree, may, under certain circumstances, become a fruit-bud, if it be not obliterated like those at the lower end of the branch; if it does not open in shoots, like the terminal bud, it enlarges slowly, taking every year one or more leaves than the preceding year, leaves of which the base of the formed bud preserves the trace. The bud that has to flower at

the end of one year, bears not less than five leaves, and oftener seven.

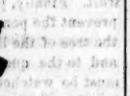
FRUITSPURS.

(Fig. 3) are fruit productions which rise at the place of a bud that has borne fruit; or if it has only opened to sterile flowers, they are covered with buds, which, according to the natural course of their vegetation, are all changed at different times into fruitbuds; the buds with which the fruitspurs are charged are owing to the leaves which have nourished them in their axils. Fruitspurs only rise on a branch which has shown its first flowers.

FIG. 2.



FIG. 3.



place of a bud that has borne fruit; or if it has only opened to sterile flowers, they are covered with buds, which, according to the natural course of their vegetation, are all changed at different times into fruitbuds; the buds with which the fruitspurs are charged are owing to the leaves which have nourished them in their axils. Fruitspurs only rise on a branch which has shown its first flowers.

FRUIT-TWIGS.

(Fig. 4), are fruitspurs which rise from fruit



FIG. 4. Fruit twigs.

branches, either naturally or by pruning, having for aim their development or unfolding; they surpass seldom the length of $1\frac{1}{4}$ feet, and sometimes not even that; their whole length is covered with fruit-buds; they can also be forced to become branches by pruning in case of need.

SPRIGS.

(Fig. 5), slimmer than fruit-twigs, and less

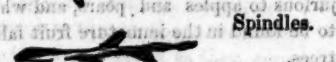


FIG. 5. Sprigs.

furnished with buds in their length, start from branches that have not been cut off at the time of pruning. When their rise has not been provoked, they show no wrinkles at their base; they are more productive when disposed originally to become fruit-buds, the pruning of the branch that carries them has made the sap flow to them and permits them to lengthen; they are more productive than the sprigs spontaneously developed; their fruit-buds take less time to form.

SPINDLES.

(Fig. 6), take their name from the pointed form



of the terminal bud; it always becomes a fruit-bud; it cannot lengthen; it presents itself sometimes from the first year in the shape of a rounded bud, which sets to flower the first or second

year; the spindle of the Pear tree has no wrinkles at its base, as it has not been protected, like a spur, by leaves that fall off; it is only developed on a branch; it does not grow beyond $2\frac{1}{2}$ or 1 1-5 inch, sometimes not over $\frac{1}{2}$ inch long.

These are the fruiting productions of the Pear tree; the most precious are the fruit-spurs united in a great number; they show then an agglomerated aspect, like fig. 7, but the trees



FIG. 7. Fruit-spurs.

which contain the greatest number of them are not always the most fruitful. Often a tree near its end is covered with a number of spurs thus clustered, whose buds flower but bear no fruit; in order that the flower may set, that the fruit holds, and that it may arrive to perfect maturity, there must be a certain number of fruit-twigs among the fruit-spurs, and sprigs among the branches, to draw to the flower-buds the sap, for want of which the flowering is always sterile.

PRUNING.

The aim of pruning is to force the branches to cover themselves with fruiting productions on the whole of their extent, to maintain among these productions sufficient fruit-twigs and sprigs to draw the sap towards the flowers and the fruit, so as to lengthen the branches methodically, prudently taking care that they grow in size as well as in length, and that the sap does not lose itself to produce a confusion of useless branches.

The pruning of the Pear tree may be considered independent of the form to be given to the tree, of which we will speak hereafter. If we refer to the three year old branch represented by Fig. 1, such as manure has made it without the help of the pruning, we will remark that the productions to bear fruit are rare and little developed; this want is owing to the excessive lengthening of the terminal bud and to the too rapid development of the lateral twigs immediately below the rise of each section; those shoots have made, the office of suckers, they have hardly left anything for the fruit buds. If each shoot had been restrained by a rational pruning, and the terminal twig had been shortened to $2\frac{1}{4}$ or 5 inches from its rise, all the buds situated below would have profited by it; the nearest bud to the pruning, more favored than the others, would have had more proneness to start, but arrested by pinching; made in time, they would have formed the basis of productive branches afterwards, or those that ought to have been suppressed, being cut a few times below their insertions, would have given rise, by the ulterior development of their inferior buds, fruiting productions. With regard to the buds placed below the twigs, favored in their growth by the pruning of the terminal twig and the pinching of the lateral twigs the nearest to the cut, they would have opened, some in sprigs, others in flower-buds, destined to become the origin of numerous fruit-spurs, from the midst of which robust fruit-twigs would not have failed ulteriorly to come out; the application of this system during three years would have put the branch in the condition presented by Fig. 8; the comparison of this branch with that presented by Fig. 1, renders sensible the effects of pruning on the development of the fruiting productions.

We see how simple is the pruning of the Pear tree, reduced to its principles. We do not speak of suckers; these monstrous productions cannot grow on a Pear tree but through the carelessness of the gardener. If he carefully inspects his trees, in order to prune and pinch properly, he will not be troubled with suckers; he will have prevented the rise of them.

Let us observe, in Fig. 8, the particular state of each section,



FIG. 8.
3d section. 2d section. 1st section.

The superfluous twigs, pruned four or five lines of their rise, are covered, some, with spindles, *a a*, others with twigs, *b b*; the inferior buds are all fruit buds; this is for the first section. We also see as many fruit-buds on the second section; the twigs must have been broken off at the points, *c c*, to hasten them to set to fruit; the single fruit-bud, which will become fruit-spurs, and the spindles that will get covered with fruit-buds, furnish, from distance to distance, the second section.—Advancing in age, they will take successively, and without the aid of pruning, the form of the fruiting productions of the first section. The third section is like the third section of the branch not pruned (Fig. 2); these are only wood-buds. Each section is altogether larger and shorter in the pruned branch, for the sap has not been left to exhaust itself in superfluous buds.—The comparison between the branches of the pruned branch (Fig. 8) and the same branch not pruned (Fig. 1), renders evident the application of the principles of the pruning of the Pear tree, and the effects of that pruning. We must always refer to the first of those two branches, in order to compare the branches which we are occupied in pruning; errors become thus impossible.

The branches which have borne fruit during several years, get fatigued or exhausted first by their inferior sections.—When this is perceived, we begin to lighten them by ranning a part of the fruit-spurs, in order to provoke on them the rise of some fruit-twigs, which can, by arresting or retaining the sap, prevent the lower part of the branches being unshurshed.—An agglomeration of spurs, represented by Fig. 9, is then



FIG. 9.

thinned by pruning at *a* and *b*; this pruning develops two fruit-twigs, which put in the state presented by Fig. 9. These fruit-twigs, cut down to a wood-bud, will become at need new branches. We see at *c c*, the place of the buds which have borne fruit at the last crop. When these means do not suffice to show that the branches is exhausted, it is shortened more or less near the stem or near the mother branch to which it belongs. Thus we find, first—we prune the terminal twigs or prolonging ones about one-third of their acquired length in one year, in order to force the inferior buds to open; second, that amidst these last buds we shorten those which are become sprigs to make their buds open in fruit-buds; third, we suppress the unnecessary wood of the year, only a few lines from the insertion of the twigs, to obtain from the best bud a fruiting production; fourth, finally, that the life of the fruiting production is prolonged by means of the spindles or fruit-twigs, and that the lopping is the only resource to renew the branches of which the fruiting productions are exhausted.

PINCHING.

The pinching, which commences in April and May, when the twigs are from $\frac{1}{4}$ to $\frac{1}{2}$ inch in length, and are yet in the herbaceous state, has no less importance than the pruning, to put to fruit or to prolong the duration of the Pear tree. Pinching has not only for its aim the shortening of a too long shoot,

as in the case of the Peach tree; it has also the inappreciable advantage of changing the motion of the sap, re-establishing its equilibrium, and making it pass to the advantage of the twigs that are necessary to the formation and the direction of the tree, and to developing in fruit-buds the buds devoted to fruit. Finally, pinching clears the tree of useless twigs, which prevent the penetration and the circulation in the interior of the tree of the light and the air, so useful to the development and to the quality of the fruits. The twigs that above all must be watched and undergo the pinching, are those that are found on the upper part of the branches. If, to come to that aim, we used the pruning instead of pinching, the bud placed underneath the cut would open and would unfold so quick in twig, that the interruption of the sap would hardly be sensible, so that the desired effect would be missed. With regard to the dis-budding, we have not to occupy ourselves with it when, we have properly pinched; the pinched twigs can remain without inconvenience until the winter pruning.

CHARGING AND DISCHARGING, OR LOADING ON FRUIT AND UNLOADING OF FRUIT.

When a vigorous Pear tree opens too many buds or wood-twigs below the pruning of each prolonging bud, we must foresee that the twigs proceeding from each of those buds will have the same disposition the next year; if then we prune to some lines from their rise, with the object to obtain fruiting productions, there would only result a confusion of useless wood; because the inferior bud of each heel, by an excess of sap, would only open in a wood-twig; then we should have to have resources to dis-budding. To avoid this, we prune, at the winter pruning, all the twigs more or less long. The effect of a long pruning on the stone fruit trees is, as we have seen, to put, all at once, all to fruit or to ruin the trees very soon; the effect of a long pruning on kernel fruit trees is to provoke a multitude of fruiting productions, spindles and sprigs, which will bear fruit later, the sap finding an issue in those productions, and gives no more rise to a confusion of twigs which render dis-budding inevitable. This manner of pruning the Pear tree is called to charge or load, as in effect they are forced to charge themselves with a quantity of fruit branches far superior to that which a common pruning could have unfolded. We repeat, we must charge thus only very vigorous Pear trees; the charging of a Pear tree by means of a long pruning must be general; it loses its aim if it is applied only to one branch in particular; a tree must be charged in all its branches if it needs it, or give it the ordinary pruning.

We call discharging or unloading of a Pear tree the suppression of a part of the fruiting productions; it is the operation of which we have indicated the necessity to grow fruit-twigs amongst the fruit-spurs and would on the branches that begin to be stripped. The lower part of the cut made with a perfect knife must be opposite to a bud, on which we shorten, and that cut must have an inclination so that the rain cannot remain on the cut surface; the small portion of wood which remains between the cut and the bud that is opposite must not be longer than two or five inches; its length is regulated by the size of the branch cut.

Often, instead of cutting the spindles and twigs that want shortening, they are broken; in this case the wound takes longer to heal, the sap is diverted longer to the lower part of the broken branch, and the fruit-buds profit more by it.

To Destroy Fruit Insects.

The Germantown Telegraph says, from this time out is the time to destroy the insects so injurious to apples and pears, and which are now to be found in the immature fruit falling from the trees.

Immature fruit of all kinds, should be picked up as soon as it falls, and destroyed. The observance of this duty will prevent much serious evil, and operate as a protection of the trees and future crops. Fruit, prematurely cast, always con-

tains insects which prey upon the fruit, causing oftentimes sad havoc, and materially lessening the yield, and consequently the profit which should arise from their cultivation.

Swine admitted to orchards and other grounds appropriated to trees of a fruitiferous class, greatly abridge the prevalence of these pests, as they destroy the fruit, and consequently the insects and eggs. The admission of them therefore, is highly judicious, and when it can be allowed with safety, ought never to be neglected. When it cannot, the fruit should be picked up and fed to them in their styes.

Retrospective Glances into the London Horticultural Transactions, in Hovey's Magazine.

On Planting the most Alluvial Banks of Rivers with Fruit Trees.

Mr. John Robertson in September, 1826, says:—Few situations combine so many advantages for the plantation of orchards or fruit gardens, as the low grounds that form the banks of rivers; the alluvial soil of which they are generally composed being an intermixture of the richest and most soluble parts of the neighboring lands, with a portion of animal and vegetable matter, affords inexhaustible nourishment to fruit trees, which derive from it such habits of health and vigor, that when sheltered by the higher grounds, which mostly accompany these plants, they set their bloom securely, and ripen their fruit to a degree of perfection, rarely exhibited in more exposed and less congenial situations. To this, the mild and moist temperature produced by the neighborhood of the water, in no slight degree contributes, counteracting the late spring frost and blighting winds, so destructive to fruit crops in the earlier parts of the season.

But these advantages are too frequently counteracted, and rendered of no avail, by the operation of the same cause as that from which they are derived, such grounds being generally liable to be inundated; and should the water lie long on them, it chills and sours the soil, and destroys the roots by canker.

The author remedied this evil, in one case of his own experience, in the following manner: He took the opportunity of a dry summer, to run between each row of trees, two deep and parallel trenches, and formed a high bank in the intermediate space, with the earth cast out, a small portion excepted, which was thrown about the stems of the old trees. On these banks, as they contained a sufficient body of soil, and were elevated above the reach of floods, he planted other fruit trees, the ensuing season, which prospered remarkably well, and bore fruit abundantly.

He also saved the old trees by a peculiar method, recorded in his communication. He remarks

that we have numerous proofs that the vicinity of water, not pent up, but exposed to the air, is not injurious to trees. Some of the most productive and healthy vines he had seen, bordered on a horsepond. Security from inundation and the advantage of a deep rich soil, are not the only benefits that fruit trees derive from growing on such sloping banks. The form of these banks also contributes mainly to insure success, as the roots of trees so planted are always necessarily protruding to the surface, where they receive more immediately the direct influence of the air, rain, sun, and other agents conducive to vegetation, and are thereby more perfectly enabled to form the simple elements they absorb, those combinations which are exhibited to us, in such a wonderful variety of products.

The Dutch have long been aware of the advantages such banks afford, and wherever the situation will admit, have planted the sloping sides of their dykes with fruit trees. The author had long observed that the most fruitful orchards, and the most fertile, are those planted on a declivity, and the steeper it is, if not quite a precipice, the more fertile it proves.

In preparing low, alluvial grounds for the purpose of planting orchards, the mounds or banks cast up should run parallel with the river, to impede the washing away of any of the soil. One or more cuts at right angles with the trenches should communicate with it to facilitate the drainage of the water; and to these sluices may be attached, should circumstances require it. These banks should be raised, if possible, at least three or four feet above the highest water mark, and be made eighteen feet broad at the base, and twelve at top. For this purpose, a cut of fifteen or sixteen feet wide will be necessary, admitting the soil to be three or four feet deep, leaving a distance between each row of fruit trees, of about thirty-three feet; but these proportions must depend on the depth of the soil. The trees, when at their full growth, will require a distance from each other in the lines, of about thirty feet; but as they are likely soon to be productive, he recommended planting them at first at half the distance, and removing every other tree afterwards, when they shall injuriously interfere with each other. The sides of such banks he found to answer extremely well for strawberries, on account of the convenience of water in a dry season.

THE MICHIGAN FARMER.—This most excellent Farmer and Horticultural paper comes to us this month in quarto form, which is a decided improvement. The farmers in Michigan should, by all means, foster and sustain their home paper, before going abroad. The publishers are doing all in their power to advance your interest and you should reciprocate it by subscribing for the *Farmer*. William S. Bond & George Snyder, publishers, Detroit, Mich. Terms—Only \$1 per annum.—*Tecumseh Herald*.

Nice's Mode of Keeping Fruit.

Mr. Benj. Nice, of Decatur, Ind., has made some experiments in keeping fruits, which he detailed at some length before the Ohio Pomological Society, a year ago, the substance of which appears in the Proceedings of the Society, just published, and which also has been described at length by R. T. Brown, of Indianapolis, in the Ohio Farmer. In the main the system is little different from that introduced about Boston a few years ago, and which has been tried by Hon. M. P. Wilder, who had a room fitted up on purpose to give it a fair test. Mr. Nice's mode of getting rid of the moisture is the same as that adopted by some French pomologists some years ago. That our cultivators may understand the system as explained by Mr. Brown, we copy his article entire:

Some years ago, Liebig discovered the analogy between the slow decay of vegetable substances and fermentation, and settled many things in reference to temperature, moisture, and other circumstances under which these actions take place. Subsequent experiments confirmed the deductions of Liebig, and fixed the range of fermentation between 40° and 180° Fah. Appert, a French chemist, introduced the practice of heating vegetable substances to 180° or above, and at that temperature, excluding them from the air, and thus effectually preventing fermentation. This method has now become so common that it has nearly revolutionized this department of domestic economy.

Mr. Nice, of Greensburg, Ind., a few years since, conceived the idea of availing himself of the margin between the fermenting point (40°) and the freezing point below (32°). His first trouble was the presence of moisture in the atmosphere; this, however, he effectually remedied by the use of Chloride of Calcium, which, by absorbing the moisture, renders the air perfectly dry. Having obtained favorable result, he secured by patent his discovery. In the summer of 1860, Meers, Fletcher, Williams & Vancamp erected in this city a large house for the purpose of testing the economical value of Mr. Nice's discoveries. As early as ice could be procured last winter, they put their house into operation.—About one thousand bushels of apples, consisting of Bellflowers, Rhode Island Greenings, Rambo's, Russets, &c., constituted the first experiment.—These were put into the market last June, as perfect in every respect as when they were taken from the tree, and with a very trifling loss in quantity. Last summer, various experiments were made on small fruits, with very encouraging results. Raspberries and strawberries were kept eight weeks, after which they lost their flavor, though they showed no evident marks of decay.

Goosberries, currants and cherries were kept in good order for a longer period, giving evidence that, with proper care, they may be kept the year round. Peaches, in ten weeks, showed evidence of decay; the skin sloughing without material dis-coloration. Of pears, about two hundred and fifty bushels were housed, and are now in a fine state of preservation. Among these are the Sugar pear, the Bartlett, Seckel, Flemish Beauty, and several other varieties of summer and fall pears. Present appearances indicate that they will be sound next summer. Grapes that were in good condition when housed, have not the slightest degree changed either their appearance or flavor. A lot from the Cincinnati vineyards, that were much bruised in transportation, suffered loss for the first ten days after being deposited, but have undergone no sensible change since.—The stock on hand is about one hundred and fifty bushels. I predict that the company will market grapes next June in good condition. Oranges, lemons, pine-apples, bananas and other tropical fruits, may be kept for months at any season of the year. Of the last crop of apples, two thousand five hundred bushels are on hand, in a most perfect state of preservation—the Fall Pearmain, Maiden's Blush, and Rambo, keeping as well as the Newton Pippin, or Romanite. A small lot of sample apples, of the fruitage of 1860, are on hand, looking well, and retaining their flavor in a remarkable degree.

The result thus far obtained, warrant us in concluding that in all climates where ice can be obtained, the standard fruits may be furnished at all seasons of the year, at prices which will bring this luxury within the reach of every family; thus largely increasing fruit consumption, and proportionately stimulating fruit culture.

The Result of Grape-grafting.

I will now report progress of the "Telegraph" grapevines you had the kindness to send me last spring.

The plant was received April 4th. It being simply wrapped in paper and sent by mail, it came to hand very dry. I placed it in water for a day to swell up. For the convenience of sending, you cut it off at the roots. I however found a side sprout of two or three small buds; this I cut off and grafted on another root. Now, to give you an idea of the advantage of grafting the grape on established roots, I will just for your own information, give you the growth of the plant and the graft. The plant, though a large and well-rooted one, has at this date just made *three inches of growth!* It will take it three, if not four years to grow, before I can hope to see the fruit. And now for the graft, this day measured: One main

shoot, eight feet six inches high; another shoot seven feet three inches high; and the laterals, (as I let all grow that will grow the first year,) some fifteen or twenty, measured all together just twenty-five feet eight inches! The whole growth forty feet eleven inches!

It was grafted about the 10th of April. It will yet make forty feet more of ripe wood before frost. I have a number of other grafts nearly as large.

Thus you see, I will fruit your "Telegraph" grape next season without fail. A graft of Maxatawney of last year has now some fifteen to twenty bunches; and many others grafted last year have now from two to twenty bunches of fruit.

Who says grafting the grape is a humbug?

None of your correspondents have yet given us their experience of grafting the grapevine above ground. My operations are all performed like the mole—under ground.—J. B. GARBER, in Germantown Telegraph.

The Sweet Potato.

BY W. W. RATHBONE, MARIETTA, OHIO.

The Nansemond is the only variety of Sweet Potato worthy of general culture in the Middle States. It produces more bushels per acre than the common Potato, on moderately fertile land; does well in almost all kinds of soil, and is fit for the table, in this latitude, from the 20th to the 30th of August.

BOTTLING.

Select rolling or well drained land. It is an error to suppose, as many do, that sandy or gravelly soils only will do. Any soil that can be made and kept mellow from May to September, will do. *New land is first rate.* It is a common error to select land too rich—such as old garden plots. Such locations produce too much vine. Side hills, too poor for a good corn crop, will often prove the best of locations. Such side hills, however, almost invariably need manure. It should be well rotted, and may be applied in hill or broadcast. On heavy lands use anything that will loosen the soil, such as ashes and leaf mold.

PLANTING.

Hills or ridges. On loamy or clayey soils make hills by all means. On very light soils ridges will do. I prefer hills in all cases: 1. You are more certain of a crop. 2. The Potatoes ripen earlier. 3. More bushels of large tubers can be obtained; and, 4. Early in the season, the large potatoes can easily be found by the bursting of the hills, and grabbed without injury to the crop.

The first idea that presents itself to many who attempt Sweet Potato raising, is a great ridge. In fact the first attempts of the mass of cultivators of this much neglected esculent, are of such a nature as to bring the least possible return. I have often seen ridges five and six feet from centre to centre. I plant acres, and the tips of the hills only measure $2\frac{1}{2}$ feet each way, and tend with horse. This makes hills the proper size. They should in no case exceed 8 feet; and $2\frac{1}{2}$ is better. Make the hills as high as possible; dry weather never hurts Sweet Potatoes. The very weight of earth in large hills and ridges prevents the growth of potatoes, and accelerates the vines.

About the 15th of May, when danger of frost is over, we begin setting out plants, and continue until July. Put one plant per hill, and 15 inches apart in the ridges.—Set deep enough to have two or three leaf buds below the surface; if cut down by worms they will grow anew. Never set when the ground is too wet to work—but the plants in the cellar with earth on the roots and wait. Choose a cloudy day, or afternoon after 4 o'clock, or early in the morning—especially foggy ones. Do not wait for rain. It is a common error to set in a muddy

time. I plant very fast thus: One to drop plants—one to pour water; *never omit the water*—and two or three to set. Make a hole large enough to hold the roots, insert the plant at the same time the water is being poured, fill the hole quickly with mellow earth without pressing. Do not use so much water as to have it run over the top of the hole: finish off with dry earth. Never water again, it is worse than useless. The philosophy of setting thus is: the water performs the triple purpose of floating the fibres into a horizontal position—carrying the fine earth among them, and putting the water in the only place needed.

AFTER CULTURE.

After every rain, as soon as the land is dry enough to work, break the crust in close contact with the plants. I do this rapidly with both hands—clapping, raising, and pressing the earth on tips of the hills. A smart boy can thus "hoe" 1000 plants per hour. It answers all the purposes of a regular hoeing while the plants are young—breaking up *ant holes*, and giving life to the plant. Keep the surface clear of weeds. Be careful not to hoe too deep. The best potatoes lie immediately below the surface. Never cut off vines. If they root at joints lift them on sunny days. Dig before frost, and put in a warm, dry place to keep.

If the above directions are followed, Sweet Potatoes can be raised with profit anywhere in the Middle and Western States.

Record's Tree Protector.

In regard to new device for the protection of fruit and other trees from the ravages of mice and insects. The article has been brought to our notice by the proprietors, and we are of opinion that it will be an effectual preventive against mice and insects, and therefore an article of utility, and one that will commend itself to all farmers, nurserymen and orchardist. It consists of two parts, a shield and a bonnet, both made of brass-wire cloth. The former is intended to go around the tree, and is secured by an India-rubber band which holds it firmly to its place. When applied, the earth is removed to the depth of an inch, the shield is drawn down to the surface, the earth is brought back again, and the upper part fastened to the tree. This prevents the depredations of the borer, and also prevents the tree from being gnawed by mice. The bonnet looks like a lampshade, and is affixed to the tree by the India-rubber belt. The under side is smeared with tar to which cotton is applied so that insects cannot ascend the tree. The cost of the article is reasonable, and from their utility they will doubtless come into general use.—*Maine Farmer.*

THE MICHIGAN FARMER.—This valuable agricultural journal for July comes to us greatly enlarged and improved. It has now assumed the book form, which makes it very handy and easy to read, and very nice to bind. The price—\$1 per year—is so low that it is within the reach of every farmer, and every farmer ought to subscribe. Their large premiums, also, are a great inducement. They offer to every new subscriber a nice pocket war map, or twenty-five choice strawberry plants; for every three new subscribers the choice Delaware Grape, and for every five new subscribers 200 choice strawberry plants, or two Delaware Grape vines, or Mrs. L. B. Adams beautiful book of poems, entitled "Sibelle." Their premiums are larger than have ever before been offered by any journal of the kind, and ought to, in connection with the former good reputation of the publication, induce every man in Michigan to subscribe.—*Buchanan Union.*

SECURE OUR PREMIUMS.

The season is fast approaching when it will be necessary for us to send our Premium Grape Vines and *Triomph d' Gand* Strawberries. We have made arrangements to secure the best of each variety. Those wishing to secure either the Strawberries or Vines must send in the names before the first of October, as it will be rather late to plant after that time. We trust that our friends will make an effort at every County Fair to get up a list of new subscribers. We shall be at the State Fair at Kalamazoo. Those sending single or a number of subscribers will please to designate which they desire—Maps, Strawberries or Grape Vines. Remember—the MICHIGAN FARMER now contains more reading matter than any other monthly agricultural journal in the United States.

Apple Scion.

Scions, says the Boston Cult., may be cut at any time between the falling of the leaves in Autumn and the starting of the buds in spring.—When taken off in the fall one method of keeping them is to bury them a foot or two deep in the earth. I once set several hundred which had been kept in this way. They appeared as fresh when taken from the ground as those recently cut from the tree—nearly all lived and made a good growth. In the case a trench was dug and some straw laid at the bottom, the scions laid on and another layer of straw put over them, and the trench then filled with earth.

When taken from the trees in winter my method of keeping them is to put the lower ends in loose earth on the bottom of the cellar, and put a box over them to retain the moisture. They may be kept in this way till June, in good condition, as I have found by twenty year's experience.

When grafting is performed early in the season, scions may be taken from the trees and set immediately with good success, but they should not be kept much length of time before using. My usual custom is to collect them in February and March, before the starting of the buds, but it may be done at any time during the winter when most convenient. The fall is the best time on some accounts; the weather is not so cold, and the ground is usually free from snow, rendering it less laborious traveling in the orchard.

When cutting scions we should be careful to select first-rate varieties of thrifty growth with well-developed buds, and from healthy trees.—Scions may be sent hundreds of miles by mail, if closely enveloped in oiled silk to keep out the air. I have received and forwarded many in this manner, but few of which failed in growing.

Marvels of the Wheat-Plant.

One of the most marvellous faculties of the wheat-plant is that of sending up a multitude of stalks from a single grain, known as *tillering*. It is the secret of its great productiveness. Many experiments have been made to ascertain the limits of this faculty, and the results have been

truly wonderful. An English gentleman sowed a few grains of common red wheat on the 2d of June, one of the plants from which had tillered so much by the 8th of August, that he divided it into eighteen others, all of which were planted separately. In a few weeks so many of these had again multiplied their stalks, that he had set out sixty-seven altogether to go through the Winter. With the Spring growth all these began tillering, so that in March and April a new division was made, and the number of plants increased to five hundred. It was believed that another division might have been made, and that it would have increased the number to two thousand. The five hundred grew most vigorously, exceeding plants as ordinarily cultivated. When harvested, a single plant yielded over one hundred ears, and the whole number of ears produced was 21,109, or more than forty to each divided plant, and the grain measured 3 3-4 pecks, weighing 47 1-2 pounds. The grains were estimated as numbering 576,840. All this was the product of a single grain.

Hen Lice, and Gapes in Chickens.

I believe I have at last made a discovery, that is very important to the poultry interest of the country, a fact that I wish all the poultry raisers to know, I therefore sent it to your widely circulated paper for publication. I set it down for granted some years since, that if hatching hens could be kept from what is called hen lice, or midges, the chicks would not take the gapes or pips, and to prevent that, I have found by frequent experiments that to kill the lice off the hens as soon as they come off with their young broods, is a sure preventive to gapes in their chickens.

My mode, or that of my better half, is to take the hens as soon as they come off with their young, and with common lard or any old grease, saturate them well under their wings and along their sides, and slightly upon their backs, which will kill all the vermin on them, and also off the chicks. Care should be taken not to put on too much, as it will lay the down on the chicks, or mat it so that they are liable to perish in the cool of the morning.

My theory of the cause of the gapes is this, that the vermin from off the old hens get on the chickens and crawl into their nostrils and are thence transformed into the gape worm that is afterward found in the windpipe of the chicken and produces the gapes. In this opinion I may be mistaken, but one thing is sure, viz: keep the vermin off the chickens and they will never get the gapes. The same remedy we have tried with our turkeys, with entire success.—*Ohio Farmer.*

THE MICHIGAN FARMER.

DETROIT, SEPTEMBER, 1863.

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All Business Communications in regard to Subscriptions or Advertising should be addressed directly to BOND & SNYDER, Publishers of the Michigan Farmer, Detroit, in order to ensure immediate attention.

TO POSTMASTERS.

We often receive returned papers, with merely the name of the subscriber upon them, and not the town, in such case it is difficult to find them, as we are obliged to go over 200 pages of names. Will they please to add the name of the Post Office. "Postmasters are responsible for the subscription of a newspaper or magazine, as long as they allow it to be received at their office, after it is uncalled for, or refused by the person to whom it is directed. The Postmaster General requires that a written note shall be sent to every publisher, that his paper or works lie dead in that office."

THE STATE FAIR FOR 1863.

Great Preparations by the Executive Committee.

Kalamazoo exerting every influence to make it one of the best ever held.

BEAUTY OF THE GROUNDS—SPLENDID PRODUCTS—PROGRAMME, &c., &c.

The State Fair will last four days, namely on Tuesday, Wednesday, Thursday and Friday the 22d, 23d, 24th and 25th of September. The Secretary has fixed his office at the Kalamazoo House already, and is ready to receive entries of stock or articles for exhibition, either at that place, or at the office of the Society, 130 Jefferson avenue, Detroit. By the programme of the Fair, it is designed that Tuesday, the first day, will be employed in receiving the entries, and arranging the articles of exhibition and competition. In the machinery department, however, it has been found very desirable that exhibitors should make their entries, if possible, during the week previous to the Fair, as many of them require steam power, and as the trial of implements, and the Plowing Match, with all the various arrangements are to come off on Tuesday and Wednesday.

The people of Kalamazoo are making extraordinary efforts to perfect the preparations for the State Fair, which is to be held this year in their beautiful village. Great additions have been made to the buildings which were already on the ground as used by the National Horse Association, and architects and artists are busily employing ornamenting and beautifying both buildings

and grounds. But, beautiful and attractive as these promise to be when completed, and filled with all that industry, ingenuity, enterprise and genius of the State can produce, there is still another attraction, which with many will be stronger than all those named combined, and that is, Kalamazoo herself. Everybody ought to see Kalamazoo, at least in their lives; of all the beautiful towns in Michigan, this is the queen; and for a sight of her, if for nothing else, everybody should go to the State Fair this year. If they make good use of their eyes and of the fine elevation surrounding the village, they will have occasion to thank the officers of the exhibition for changing its location once at least from the old familiar city haunts. Hundreds of people came to the Fair at Detroit last fall, and went through the halls and buildings muttering, "It's same old story year after year; the same things in the same places; we know them and the city by heart, we've been here so often." This year it will be a new picture in a new place, and Kalamazoo will be a charming back ground of which the eye will not grow weary. So if anybody should be so miserably off as to have worn out his public spirit in connection with the State exhibition, we recommend to take advantage of this one to go and to see Kalamazoo.

One of the most prominent features of the Fair this year will be the great display and trial of agricultural implements. This, it is expected, will attract even more universal attention than the cattle and horse departments. Last year a great effort was made by the officers of the Society to advance the interests of machinists and manufacturers in this way, and this effort was so successful and so well appreciated by farmers as well as by the manufacturers and venders of such implements, that much additional interest and importance will be given to that department the present year. A special committee has been assigned to take charge of it consisting of W. G. Beckwith, of Cassopolis, John Allen, of Plymouth, and E. S. Moore, of Three Rivers. A portable steam engine will be furnished on the ground by Messrs. Nichols and Shepard, of Battle Creek; for the purpose of thoroughly testing the threshing and cleaning machines, that can be worked by steam. One hundred dollars, one-half given by Messrs. Nichols & Shepard, and the other half by the Society, will be appropriated to defraying the expenses at these trials, and to make proper awards to the successful competitors. The chairman of the special committee on Implements, W. G. Beckwith, Esq., has made arrangements to have Wheat on the ground for the testing of threshing and cleaning machines, so that the trials may be thorough and satisfactory.

As this trial of implements and the Plowing Match, which will be another exciting feature, are to come off on Tuesday and Wednesday, the 1st and 2nd day of the Fair, it is very necessary that all entries for those departments should be made the week previous, and that all articles connected with these arrangements should be upon the ground by Tuesday morning, the 22d, at the very latest. There is nothing like being on hand in time, with everything ready. For the satisfaction of manufacturers who design to exhibit, and that their views may be known and receive attention, either the chairman of the committee or the Secretary can be communicated with at any time.

A piece of land on the east side of the Fair Ground, belonging to the National Horse Association, has been liberally assigned to the Society's use for its plowing match, and for the trial of harrows, planters, seed drills, cultivators, rollers and all varieties of plows; thus giving every chance that can be asked for a thorough and perfect test of those implements upon which the farmer must now more than ever depend for the cultivation and harvesting of his crops.

The buildings to be occupied for the display of manufactured articles are weather proof, so that there need be no fear of endangering the choicest fabrics or the finest textures, the products of the loom, or the more delicate handiwork of delicate fingers.

Floral Hall, always the chief attraction to the crowd, always the bower of beauty through which all beauty and lovers of beauty must pass, will on this occasion be even more splendid than in former years, when it has been almost universally conceded that Michigan excelled even her older neighbors, New York and Ohio, in this respect. A new Hall, one hundred feet long, and fifty feet wide, has been put up for this special purpose, at a cost of \$1,600. Messrs. Bush and Patterson are the architects, which is saying enough to assure all that the work is satisfactory, and that an artistic, weather-proof and water-tight repository will be found for such works of art as may be brought for exhibition. We understand that in this Hall Messrs. Godfrey, Denn & Co., of Detroit, have secured a place for that splendid painting, which has attracted so many visitors to their rooms, Winterhalter's life-like and life-size portrait of the Empress, Eugenie. This alone will draw crowds of admiring eyes. Other choice paintings from this gallery will also accompany it. The picture department will be in an L attached to Floral Hall, a handsome room, which will be under the special superintendence of B. Cooley, Esq., an accomplished artist and resident of Kalmazoo. He has given much attention to the proper light-

ing of the room for artistic effect, and will assist in ornamenting it with some of his choice productions. He is well known as one of the finest animal painters in the country. Other eminent artists—Healy, of Chicago, among them have promised to add pieces to the exhibition, and the collection already promises to be one of the finest and most extensive ever shown in the State.

To render the display of Floral Hall still more attractive and perfect, the citizens of Kalmazoo at an expense of \$1000, have laid pipes through which water is conducted to the hall, and have ordered a beautiful fountain from New York, which is to be placed in a basin fifteen feet in diameter, fed from the pipes, while multitudes of fish from the adjoining lakes will sport in the basin, for the amusement of the spectators. Dr. Seymour has taken upon himself the duty of attending to the arrangement and perfection of matters in this department. The ladies of Kalmazoo will devote their artistic skill to the decoration of the Hall, and the designs and execution of the rural work will be superior to any yet seen at our State Fairs.

The cattle show is also expected to be large, though it is as yet too early to specify definitely on that head. Places have already been spoken for some of the best Devon and Shorthorn herds in the State. We hear also that it is quite probable other States will be represented, and among them Illinois, by specimens from the noted stock of the Hon. John Wentworth, bred on his farm in the vicinity of Chicago.

This year the society has largely increased the premiums in the sheep division, and have given the breeders of the several breeds of Merinos or fine wooled sheep every opportunity to bring forward their finest bucks and ewes. Separate classes have been established for the Spanish, French and Silesians, and Saxons. Besides, large premiums are offered to the best Merino bucks, with clear pedigrees of their undoubted descent without blemish from pure bred imported stock. As the wool interest has been so largely developed the past year, and parties from the West are constantly and steadily seeking for Michigan sheep to export to other States, the State Fair is the place where the sheep growers ought to bring specimens of their flocks to test their qualities and to make them known.

The competition in horses of all classes promises to be even more spirited than usual. Aside from the regular premiums offered by the State Society, the directors of the National Horse Association propose to give two special ones—one to the best thoroughbred running, and another to the best trotting horse, the premiums to be at least two hundred dollars each, with the entrance

money added. The premium for running horses will be given to the winner of mile heats, and the conditions require that there shall be at least three entries, and the entrance fee for each horse will be fifty dollars; this will be added to the premium money won. The second horse will be paid the second premium \$75.00 to be deducted out of the whole amount, the winning horse taking the balance. The premium for trotting horses will be under the same condition, except that it will be for mile heats best three in five. We have reason to believe that Magna Charta, Primus, Hero and other noted horses will be among the competitors for these premiums. No conditions as to age or standing are imposed upon entries for these awards. Altogether, from what is now known, the exhibition of horses promises to be very imposing, several entries of importance having already been made.

The general programme for the exhibition will be as follows: Tuesday, the first day, will be employed in making entries and arranging the articles in the several departments, and in trial of implements. The trial of plows will be commenced, and the arrangements completed for the plowing matches, and for the trial of all machines and implements.

On Wednesday, the second day, the committees will be expected to be present, as vacancies will be filled. The examination of cattle will take place in the cattle ring. In the implement department the plowing matches and the trial of implements and machinery will be completed.

On Thursday, the third day, the examination of young horses in front of the Grand stand will commence in the morning. In the afternoon the annual address will be delivered before the members of the Society, by the Hon. J. M. Ashley, of Ohio. After the address the trials of the trotting and cavalry horses will be made.

On the fourth day, Friday, the great trials of speed, for the several large premiums, will be made, and the contest for the special premiums will come off. The annual election of officers will be held in the afternoon, when the Fair will close.

On the evening of the last day, the gentlemen of the National Horse Association propose to illuminate Floral Hall, and give a grand agricultural promenade concert and ball. This closing of our annual State Festival is looked forward to with great interest, and if the weather is propitious, it will doubtless afford all the pleasure the most sanguine anticipate.

The Superintendents of the several railroads of the State, with the liberality to the agricultural interests which has always distinguished them, will afford the usual facilities to visitors

and exhibitors which have been granted in previous years. Extra excursion trains, on the Michigan Central, will run to Kalamazoo from Detroit and Chicago, and the rates will be such as has been usual in previous years. The connections with the Jackson branch of the Michigan Southern will be perfected, so that no delay need occur.

The efforts made by the business people of Chicago ought to stimulate the business men of Detroit to make a generous exhibition of their various manufactures at Kalamazoo. Already we find Chicago stretching out its feelers in business as far East as Jackson, and attracting to itself, by its generous enterprise, a large quantity of the business that Detroit should secure. The fair affords an opportunity that ought not to be neglected by the enterprise of this city, and we call attention to it.

Information can be obtained at the Kalamazoo House, Kalamazoo, or from the Secretary of the Society, office 130 Jefferson avenue.

Tobacco in Michigan.

We have always thought that with a good selection of seed and proper attention to its cultivation, that a fair article of tobacco might be produced in this State, to meet the demands for local consumption, and early in the season advised farmers to try a small patch by the way of experiment. The advance in price, and our advice induced many persons in this locality to set out plants, and we have seen a number of pieces, varying from 20 feet square to an acre, and they were invariably large and in fine condition, especially so where planted upon a gentle slope with a black loamy soil. From what we have seen there is no doubt but that it can be grown by any one who undertakes with as little trouble as sorghum sugar cane. Localities farther north than Detroit appear to succeed in producing a well-grown leaf, which is one of the most successful points to be attained in its cultivation. The Midland City Sentinel, speaking of tobacco, says:

"We saw some very large and nice specimens of tobacco plants, raised by Charles Cronkright, of the township of Homer. Some of the leaves measured three feet in length, and from eighteen to twenty inches in width. Who can beat it?" The Albion Herald also states, that "Mr. George Ballantine has shown us tobacco leaves grown by him which measures two feet nine and three-inches in length." We have heard of one field of twenty acres within 30 miles of Detroit, which will produce a fine heavy crop. This proves practically that tobacco can be raised in Michigan.

W. S. F. says, "I know it will not mature in time to show any sale, but in about 3 weeks more to secure strawberry premiums."

The Great Frost.

The frost of the 29th of August was nearly as severe as that of 1856, which created such wholesale destruction. Accounts from Illinois, Indiana, Wisconsin, Minnesota and Iowa gives a most deplorable state of things. Corn, buckwheat, tobacco, cotton, grapes, melons, and tender fruits have suffered to an untold extent. In many places the farmers have cut the wilted corn for fodder; sugar cane stood the attack much better than the reputed hardier crops. The frost reached even to Louisville, Ky., and injured the tobacco crop—in Cincinnati, it was so severe as to damage sweet potatoes, melon and squash vines and tobacco;—millions of dollars will not make up the loss of one night. Hay will no doubt advance materially in price in consequence of the great destruction of the corn crop, as also will oats. In Michigan, we have not heard of a serious damage generally, although there has been considerable complaint in regard to tender crops, buckwheat being pretty well cut up, and corn, squashes and tomatoes injured in some localities—yet this does not appear to be wide spread; we think this is owing in a great measure to the immense bodies of water which surrounds this State, which renders the temperature more even, consequently less subject to sudden heavy frosts than any State in the Union. Thus our farmers may congratulate themselves that they have some natural protection against early hard frosts.—W. S. B.

For the Michigan Farmer.
Product of a Young Cow. *Product of a Young Cow.*

SCHOOLCRAFT, Aug. 25th, 1863.
MESSRS. EDITORS,—Please find enclosed the amount of my subscription—I also send a statement of the product of my cow—four years old. I purchased her two months since, with a second calf by her side—she had been badly wintered, and ran in the highway until I got possession of her, and consequently was low in flesh. I have no doubt when older and under more favorable circumstances, there will be a considerable increase of milk and butter over her present yield, (young cows seldom give as rich milk as when old.)

Her appearance resembles a thoroughbred Durham, but she is only three-quarter grade. The calf suckled until seven weeks old, up to which time it did not take all the milk. When the whole mess was obtained it was large considering all the circumstances—her age, condition, &c. I was induced to weigh each mess daily, and found the average weight of 46 pounds per day; curiosity also induced me to put her on the scales to ascertain how long it would require to get her weight in milk. She was weighed soon after

giving her her feed, water and hay, (which no doubt increased her weigh the amount of one day's milk)—her weight was 1010 lbs. and in 22 days gave 1012 lbs. of milk. Two quarts was taken daily for family use, the rest set for cream, and under some disadvantages, having no good place to keep it, and at an unfavorable time (August,) still 1 pound per day of well worked butter was obtained. The amount of milk and butter may not be an extraordinary yield, but could I have continued the same feed as when the calf was with her, or had good pasturage I have no doubt she would at the time of weighing her milk given considerable more, as she was then allowed to feed night and morning on a small patch of green oats; but since obtaining all the milk she is kept in the yard to hay and ten quarts of bran with two quarts of Indian meal per day, scalded—and last tho' not least of all, she is one of the most pleasant cows to milk and handle I ever set a pail under—a little girl eleven years old milks her part of the time. If you think the above worthy of a place in your paper you are at liberty to use it.

Allow me to add altho' the general appearance of said cow indicates good milking qualities I was governed more by her "Estuchons, or milk marks" as described by Guisott's Treatise, which I consider a correct test as to the quality and duration of giving milk between having calves, when the extent of that peculiarity has not been interfered with by bad management; also the productiveness of a cow not only depends much upon the keeping she gets, but her yield of milk even during the whole season by the condition of the animal when the secretion of milk commences.

Good, even first rate milkers, may be found among all forms, like fast horses, but I will assert without the fear of contradiction, that whoever has A No. 1 milker, has a good "handler" with full developed "milk marks." All animals and vegetable bodies differ more or less as to their degree of vascular functions pertaining to different qualities. No animal with hard unyielding skin will take on flesh or give milk under the same circumstances like one with a soft pliable hide.

The reason is obvious—the hide is an index to the development of the vascular and secretory functions, hence the importance of being guided by such rules as observation and experience have fully tested as likely to obtain the desired object.

Yours, &c., *M. FREEMAN.*
The Michigan Farmer.—The *Michigan Farmer*, for the current month appears on our table much enlarged and a vastly improved form, to our mind. Its form now is similar to the regular monthly, (though of course in cheaper style,) and is much more convenient for binding. The present number contains 50 pages, of the best reading matter for the farmer.—*Monroe Commercial Journal*.

In your second letter
of the month, so until and
then heath
The Fertility of Syria.

*Translated from Ferdinand Stolle's "Napoleon in Egypt,"
out in four volumes, 1801, vol. i., p. 261.*

BY J. H. MULFORD.

When we consider the barbarous government of this country, so inimical and restrictive to the pursuits of industry, the list of products which its soil affords must astonish us. Aside from the hundred grained wheat, rye, barley and beans that are produced here at all points, each district has its own peculiar productions. Thus Palestine is rich in Sesame, from which a rare oil is extracted, and in Tura, a kind of lentil. Maize yields enormous crops in the light soil of Baibel. In the gardens of Saide and Beirut a most excellent sugar cane is cultivated as in the Delta. In the Bism territory the Indigo plant grows without cultivation on the banks of the Jordan. The coasts of Lacotia affords a species of smoking tobacco, the transportation of which constitutes the principal commerce between Damietta and Cairo. At Antioch, the Olive tree reaches its greatest height, and the fine silk of that district gives competency and wealth to the land of the Druses, while its vines that so frequently entwine themselves picturesquely around the old oaks, afford a beverage that is in no respect inferior to the wine of Bordeaux. Gaza, as Mecca, has dates, and pomegranates as Algiers; Tripoli furnishes oranges, as well as Malta; Beirut figs like Marseilles and Pisang fruit as St. Domingo. Pictachos grow at Aleppo and nowhere else. Damascus unites in its numerous and splendid gardens all the flowers and fruits of France. On its stony soil are cultivated as well the apples of Normandy as the plums of Tourraine and the peaches of Paris. Its different varieties of apricots number as many as twenty, one of which is so superior in quality that it is celebrated throughout all Turkey. Finally, along the whole Syrian coast the Cochineal plant grows, for it is as certain by the fact that this valuable insect is found here as it is that the general opinion has heretofore been that it has only Mexico and St. Domingo for its abiding place.

The numerous serpents found here, and the scorpions in particular would all but render the country almost uninhabitable.

And to the above pests must be added the Locusts, the winged plagues of the land. A person who has not been an eye-witness to the characteristics of the Syrian Locust can form no idea of the detriment they are to the husbandmen of the country. At times the earth for miles is covered with these destroying insects. The noise they make in their voracious course is heard at a great distance. One might suppose that an invisible army is foraging around him, and that their

route suffered from the blight of a conflagration. For wherever the swarm rests all the verdure of the fields vanishes as if a green curtain had rolled up in his sight. Trees and plants stand leafless before him. The most gloomy winter immediately succeeds the gayest spring. If a swarm of locusts pass near you, the sky is darkened in the literal sense of the word. The natives often seek to drive them away with smoke; they also dig ditches into which the insects fall and are destroyed. But their most deadly enemies are the south and south-east winds, and a bird called the Samarmar—this bird is similar to the European Goldhammer, and follows the locusts killing them in great numbers—the south and south-east wind drives them into the Mediterranean Sea, where they perish by millions, and then are thrown by the surf on the land, sometimes in such numbers as to infect the atmosphere.

[The foregoing is very interesting and acceptable, and we hope that our correspondent will favor us with any translations relating to agriculture, horticulture, floriculture, or stock-raising, that he may judge proper to furnish.]

September Management of Bees.

In some sections of the country, where fall blossoms abound, bees will find pasture during a considerable portion of this month; and though much of the honey they now gather is less palatable than that collected at an earlier period, it will answer well for their own subsistence in the coming winter. But their accumulation derived from honey-dews on evergreens generally prove injurious to the stock. This honey is of a very inferior quality, and cannot be properly purified by the bees, because of the lateness of the season at which it is gathered; and as it, for the most part, remains unsealed in the cells, it is apt to become acid and produce disease, if the bees happen to be long confined by the severity of the winter, or the inclemency of the weather. Besides this, when tempted to be, by the occurrence of such honey-dews at so late a period, many bees will be lost by becoming entangled in the webs of spiders, or be destroyed by hornets, which now eagerly watch for, catch and devour them.

Toward the close of the month the colonies usually contain very little brood, and, if kept in common hives, the bees of such as are not intended to be wintered as independent stocks, may now be driven out and given to the best provisioned standards. The stores and combs may either be appropriated at once, or reserved in the hive for spring use, to receive the earliest swarms. Where movable-comb hives are used, it is unnecessary to defer these operations to so late a period, as the

containing brood may at any time be transferred to the hives intended to be wintered, and colonies can be united without producing much commotion among the bees. Such colonies only as are in a healthy condition, have a young and fertile queen, and ample stores of honey and pollen, should be wintered. The attempt to carry feeble stocks through the winter will almost invariably end in disappointment, besides being attended with continual vexation of spirit. The making of artificial colonies, properly employed, is of incalculable importance in bee culture, mainly because we can thereby always secure a supply of young and vigorous queens, but it becomes ruinous to an apiary when the bee-keeper multiplies stocks injudiciously and inordinately, and then undertakes to winter his feeble and ill-provisioned colonies. None should be reserved for wintering but such as have at least twelve pounds (nett) of sealed honey on the first of October, and have sound clean combs, a healthy vigorous queen, and bees enough to cover five or six combs when clustered on them in the evening. All that fall below this standard should be broken up, adding the bees to other stocks, and using the stores for further provisioning the weaker of those retained. The poorer the season was, the more care should be taken to unite and strengthen the colonies in the fall. All the good new and clear combs obtained by these operations should be carefully preserved for spring use—they will “come into play” when hiving early swarms or making artificial colonies. These, if supplied duly with good empty comb, will in three or four weeks, be quite as valuable as an old stock whose feebleness exacted much attention and constant care during the winter. He who is in the habit of wintering weak colonies must never expect to become a prosperous beekeeper. He will have trouble during the winter, and with all his watchfulness will lose some stocks; those which survive will make slow progress in the spring, be laggards during the summer and, instead of yielding him some surplus honey in the fall, will probably need renewed nursing.

Even if after a favorable season, it be found that all the colonies in an apiary have secured sufficient supplies, it will not be advisable to winter them all. Among them there will probably be some whose queens are old and decrepid. Should these chance to survive till spring, the number of eggs laid by them would be too small to replenish the population of their respective hives adequately and early. Such had better be disposed of in the fall. If the hives contain good combs and a sufficiency of stores, the superannuated queens should be removed and replaced by a young one from a colony not so well prepared in other respects, to

pass the winter safely. Italian queens may at this time be more conveniently introduced into common colonies than at almost any other period. There being now but little brood in the combs, the workers are less disposed to build royal cells after the removal of the old queen; and the Italian queen may without disadvantage, be kept confined in a cage for a week or longer, till the bees have become entirely willing to accept her. Queens may likewise be used whose genuineness has been previously ascertained or fully tested.

Those who still practice the old mode of taking surplus stores from the colonies, by cutting out a portion of the combs containing sealed honey, must deal liberally with their bees—allowing them to retain a full sufficiency for their support, so situated as to protect them from the severity of the weather, and being likewise conveniently accessible, from time to time as needed. It is better that the bees should have more than enough, than to rely on spring feeding, should their supplies fall short.

Colonies which still retain their drones at the close of this month, are usually queenless. The population of such is almost invariably much reduced and composed of old bees exclusively, which are not well qualified to endure the rigors of winter. The proper course is to break them up and appropriate the honey. The combs of such stocks generally contain large quantities of pollen, and should therefore be preserved till the close of winter. Then they may profitably be given to young stocks of the previous year, which are rarely well supplied with that article.—*Bee Journal.*

Road Making.

The following hints upon this subject we find as worthy of consideration; and as many devote some of the fall to repairing and making roads we give them for the benefit of farmers and others:

In road-making, one great requisite is the ready and total removal of all water. There cannot be a good road where water stands by the side of or on it. If the ditches have no ready outlet, the road-bed will soak up the moisture more or less, by capillary attraction, and thus remain rutted and muddy. It is vain to think of having a good road on a subsoil, filled with stagnant water. Even on side hills, if water remains on the upper side, it will injure the road by passing under. Provide, then, if possible, for the thorough drainage of your roads—either by surface or covered ditches. See, then, that the road-bed is evenly and slightly rounded, so that the water can readily find its way to the drains. If the soil is clayey or loamy, give it a few inches of gravel, or even coarse sand, and you will have a fine and pleasant passage-way. If the soil is sandy, it needs an addition of clay to correct it, and this will correct it, so that good roads may be had over the lightest sandy soils.

HOUSEHOLD WORDS.

*For the Michigan Farmer.***Rural Songs—No. 1—The Plow-Boy.**

BY CHARLES BOYNTON HOWELL.

Out in the morning when the beams

From the Orient, over hills and streams
Are glancing brightly, with lustrous ray,
Heralding forth the new-born day.—

Out in the early morn he goes,

His cheeks as red as the damask rose,
As his voice o'er the hill tops gladly rings,
While gleesome carols he merrily sings.

Now he whistles a stirring tune—

Free as the voice of a breeze in June,
As he urges his tardy team to press
On in the furrow, with cheerfulness.When the swift day-god's course is run,
And the plow-boy's daily task is done,
Homeward he wends his weary way,
With cheerful thoughts of the vanished day.

Happy and lightsome is his heart—

No tears of grief from his eye-lids start,
May joyous and gladsome be his day,
Till the last glimmer of life's sun's rays!

Pontiac, September, 1863.

The Old Farm House.

At the foot of the hill, near the old red mill,

In a quiet, shady spot, just peeping through, half hid from view,

Stands a little moss-grown cot;

And straying through at an open door,
The sunbeams play on the sanded floor.

The easy chair, all patched with care,

Is placed by the old hearth stone;

With witching grace, in the old fire-place,

The evergreens are strewn,

And pictures hung on the whitened wall,

And the old clock ticks in the cottage hall.

More lovely still, on the window sill,

The dew eyed flowers rest,

Whilst midst the leaves, on the moss-grown eaves.

The martin builds her nest,

And all day long the summer breeze

Is whispering low to the bending trees.

Over the door, all covered o'er,

With a sack of dark green baize,

Lays a musket old, whose worth is told

In the events of other days;

And the powder flask, and the hunter's horn,

Have hung beside it for many a morn.

For years have fled, with a noiseless tread,

Like fairy dreams away,

And left in their flight, all shorn of his might,

A father—old and gray;

And the soft wind plays with his snow-white hair;

As the old man sleeps in his easy chair.

In at the door, on the sandy floor,

Light, fairy footsteps glide,

And a maiden fair with flaxen hair,

Kneels by the old man's side—

An old oak wrecked by the angry storm,

While the ivy clings to its trembling form.

Domestic quiet is a jewel; love the light it.

*For the Michigan Farmer.***The Soldiers' Guard.**

BY CHARLES BOYNTON HOWELL.

Whall shall the soldiers gurdon be,

When the ultimate victory,

Is won mid the paems of the free?

What shall it be when grim-faced War

Hath fled to Oblivion's realms afar,

And over us beneath Peace, calm star?

When the wounded warrior's gory stain

Shall no more crimson the battle-plain?

(Nor shall there slumber the hero-slain.)

When the husbandman in his quiet field

Need not to a summons for aidance yield?

(For the contest's issue will then be healed.)

Methinks that the future's voice doth say,

That in that approaching welcome day,

The soldier's brow will be wreathed in bay,

Him Honor shall greet, and sweet-voiced fame

Sound through the land his hero name,

And blason his deeds in words of flame.

In History's scroll will his name appear

As a brave unknown to coward-fear;

And unto his memory men will rear,

Monuments which will emblemize

Of a nation's love for the brave and free,

Who fought for their country's Unity.

Pontiac, July, 1863.

Ladies get your Canes.

Ladies carrying canes is the very latest novelty from abroad. The fair Empress Eugenie has conceived a new notion, and taken another step in advance of the rest of *le bon ton*, by introducing long walking sticks or canes for ladies to sport in public. We soon expect to see nearly every lady in Michigan flourishing a second-growth hickory, if this style becomes as prevalent as the "hoops," which she introduced. These, however will prove more useful and effective weapons than white wood broom-sticks, if there is occasion to use them. A Paris correspondent of the N. Y. Times says:

"The Empress of France, who is leading the fashions on the Continent, has introduced a new feature, and I will describe it. The Empress has again appeared with a long walking-stick, and now the fashion is fixed. Every lady at a watering place must "wear a cane;" and the shop windows of Paris are beginning to display them, with "prices to suit customers." Some very cheap and homely, others elegant and costly. The length of the stick depends on the height of the lady, as they are recommended so come about up to the lady's shoulder. They are carried for support, for protection, and for distinction; that is the ladies like to have "something in their hands to play with," and especially at the seaside where they are always breaking the points of their parasols, by poking at pebbles and things. And then, why should not a woman carry a cane as well as a man? Is she not the weaker vessel?"

Philosophy of Exercise.

All know that the less we exercise the less health we have, and the more certain are we to die before our time. But comparatively few persons are able to explain how does exercise promote health. Both beast and bird, in a state of nature are exempt from disease except in rare cases; it is because the unappeasable instinct of searching for their necessary food, impels them to ceaseless activities. Children, when left to themselves eat a great deal and have excellent health, because they will be doing something all the time, until they become so tired they fall asleep; and as soon as they wake, they begin right away to run about again; thus their whole existence is spent in alternate eating, and sleeping, and exercise, which is interesting and pleasurable. The health of childhood would be enjoyed by those of maturer years, if, like children, they would eat only when they are hungry; stop when they have done; take rest in sleep as soon as they are tired; and when not eating or resting would spend the time diligently in such muscular activities as would be interesting, agreeable, and profitable. Exercise without elasticity, without an enlivenment of the feelings and the mind, is of comparatively little value.

1. Exercise is health-producing, because it works off and out of the system its waste, dead, and effete matters; these are all converted into a liquid form, called by some "humors," which have exit from the body through the "pores" of the skin in the shape of perspiration, which all have seen, and which all know is the result of exercise, when the body is in a state of health. Thus it is, that persons who do not perspire, who have a dry skin, are always either feverish or chilly, and are never well, and never can be as long as that condition exists. So exercise, by working out of the system its waste, decayed, and useless matters, keep the human Machine "free;" otherwise it would soon clog up, and the wheels of life would stop forever!

2. Exercise improves the health, because every step a man takes, tends to impart motion to the bowels; a proper amount of exercise keeps them acting once in every twenty-four hours; if they have not motion enough, there is constipation, which brings on very many fatal diseases, when it is kept up to an extent equal to inducing one action of the bowels daily.

3. Exercise is healthful, because the more we exercise the faster we breath. If we breath faster, we take that much more air into the lungs; but it is the air we breathe which purifies the blood, and the more air we take in, the more perfectly is that process performed; the purer the blood is, and as everybody knows, the better the

health must be. Hence, when a person's lungs are impaired, he does not take in enough air for the wants of the system; that being the case, the air he does breathe should be the purest possible which is out-door air. Hence, the more a consumptive stays in the house, the more certain and more speedy is his death.—*Hall's Journal of Health.*

Dull Children.

No fact can be plainer than this, that it is impossible to judge correctly of the genius or intellectual ability of the future man, by the indications of childhood. Some of the most eminent men of all ages were remarkable only for dullness in their youth. Sir Isaac Newton, in his boyhood, was inattentive to study, and ranked very low in school until the age of twelve. When Samuel Wythe, the Dublin schoolmaster, attempted to educate Richard Brinsley Sheridan, he pronounced the boy an "incurrigible dunce." The mother of Sheridan fully concurred in this verdict, and declared him the most stupid of her sons. Goldsmith was dull in his youth, and Shakespeare, Gibbon, Davy, and Dryden do not appear to have exhibited in their childhood even the common element of future success. When Berzelius, the eminent Swedish chemist, left school for the University, the words "Indifferent in behaviour, and of doubtful-hope," were scored against his name; and after he entered the University, he narrowly escaped being "turned back." On one of his first visits to the laboratory, when nineteen years old, he was taunted with the inquiry, whether he "understood the difference between a laboratory and a kitchen." Walter Scott had the credit of having "the thickest skull in the school," though Dr. Blair told the teacher he could discover many bright rays of future genius, shining through that same "thick skull." Milton and Swift were justly celebrated for their stupidity in childhood. The great Isaac Barrow's father used to say, that if it pleased God to take from him any of his children, he hoped it might be Isaac, as the least promising. Clavius, the first mathematician of his age, was so stupid in his boyhood, that his teachers could make nothing of him till they tried him in geometry. Carracci, the celebrated painter, was so inapt in his youth, that his masters advised him to restrict his ambition to the grinding of colors. "One of the most popular authoresses of the present day," says an English writer, "could not read when she was seven. Her mother was rather uncomfortable about it, but said that as everybody did learn with opportunity, she supposed her child would do so at last. At eighteen, this apparently slow genius paid the heavy but inevitable debts of her father from the profits of her first

work, and before thirty, had published thirty volumes." Dr. Scott, the commentator, could not compose a theme when twelve years old; and even at a later age, Dr. Adam Clarke, after incredible effort, failed to commit to memory a poem of a few stanzas only. At nine years of age, one who afterwards became a chief justice in this country, was, during a whole winter, unable to commit to memory a little poem found in one of our school books.

Labor and patience are the wonder workers of man—the wand with whose magic touch he changes dross into gold, deformity into beauty, the desert into a garden, and the ignorant child into the venerable sage. Let no youth be given up as an incorrigible doit, a victim fit only to be laid upon the altar of stupidity, until labor and patience have struggled with him long enough to ascertain whether he is indeed a "natural fool," or whether his mind is merely enclosed in a harder shell than common, requiring only a little outward aid to escape from its prison, into a vigorous and symmetrical life.

Great Eaters
Never live long. A voracious appetite, so far from being a sign of health, is a certain indication of disease. Some dyspeptics are always hungry; feel best when they are eating, but as soon as they have eaten their enter torments, so distressing in their nature, as to make the unhappy victim wish for death. The appetite of health is that which inclines moderately to eat, when eating time comes, and which, when satisfied, leaves no unpleasant reminders. Multitudes measure their health by the amount they can eat; and of any ten persons, nine are gratified at an increase of weight, as if mere bulk were an index of health; when, in reality, any excess of fatness is, in proportion, decisive proof of existing disease; showing that the absorbents of the system are too weak to discharge their duty; and the tendency to fatness, to obesity, increases, until existence is a burden, and sudden death closes the history. Particular inquiry will almost unvaryingly elicit the fact, that a fat person, however rubicund and jolly, is never well, and yet they are envied.

While great eaters never live to an old age, and are never for a single day without some "symptom," some feeling sufficiently disagreeable to attract the mind's attention unpleasantly small eaters, those who eat regularly of plain food, usually have no "spare flesh," are wiry and enduring, and live to an active old age. Remarkable exemplifications of these statements are found in the lives of centenarians of a past age. Galen, one of the most distinguished physicians among the ancients, lived very sparingly after the age of twenty-eight,

and died in his hundred and fortieth year. Kettenberg, who never tasted spirit or wine, and worked hard all his life, reached a hundred and eighty-five years. Jenkins, a poor Yorkshire fisherman, who lived on the coarsest diet, was one hundred and sixty-nine years old when he died. Old Parr lived to a hundred and fifty-three; his diet being milk, cheese, whey, small beer, and coarse bread. The favorite diet of Henry Francisco, who lived to one hundred and forty, was tea, bread and butter, and baked apples. Ephraim Pratt, of Shutesbury, Massachusetts, who died aged one hundred and seventeen, lived chiefly on milk, and even that in small quantity; his son Michael, by similar means, lived to be a hundred and three years old. Father Cull, a Methodist Clergyman, died last year at the age of a hundred and five, the main diet of his life having been salted swine's flesh (bacon), and bread made of Indian meal. From these statements, nine general readers out of ten will jump to the conclusion that milk is "healthy," as are baked apples and bacon. These conclusions do not legitimately follow. The only inference that can be safely drawn is from the only fact running through all these cases—that plain food and a life of steady labor tend to a great age. As to the healthfulness and life protracting qualities of any article of diet named, nothing can be inferred, for no two of the men lived on the same kind of food; all that can be rationally and safely said is, either that they lived so long in spite of the quality of the food they ate, or that their instinct called for a particular kind of food; and the gratification of that instinct instead of its perversion, with a life of steady labor, directly caused healthfulness and great length of days. We must not expect to live long by doing *any one thing* which an old man did, and omit all others, but by doing *all* he did, that is, work steadily, as well as eat mainly a particular dish.—*Hall's Journal of Health.*

An Amusing Anecdote.

Hog In—Hog Out.—The following good story is told of a deacon in the city of S——, in Northern Ohio:

The deacon was the owner and overseer of a large pork packing establishment. His duty was to stand at the scalding trough, watch in hand, to time the length of the scald—crying, "Hog in," when the just slaughtered hog was to be thrown into the trough, and "Hog out," when the watch told three minutes. One week the press of business compelled the packers to unusually severe labor, and Saturday night found the deacon wholly exhausted. Indeed, he was almost if not quite sick, the next morning when church time came; but he was a leading member, and it was his duty

to attend the usual Sabbath service if he could. He went. The occasion was one of unusual solemnity, as a revival was in progress. The minister preached a sermon well calculated for effect. His oration was a climax of great beauty. Assuming the attitude of one intensely listening, he recited to the breathless auditory:

"Hark!—they whisper; angels say—"

"Hog in!" came from the deacon's pew in a stentorian voice. The astonished audience immediately turned their attention from the preacher, but he went on, however, apparently unmoved:

"Sister spirit come away!"

"Hog out!" shouted the deacon, "tally four!"

This was too much for the preacher and the audience. The latter smiled, some snickered audibly, while a number of boys broke for the door, to split their sides laughing outside, within full hearing. The preacher was disconcerted entirely—sat down—rose again—pronounced a brief benediction, and dismissed the anything else but solemn minded hearers.

Greek Fire.

What is known as the "Greek Fire" is no new instrument of warfare. Twelve hundred years ago, 668, it was used by the Greeks in their defense of Constantinople against the Saracens; and again, a half a century later, in 718. Then it was employed by the besieged against the besiegers; and the latter, the Saracens, seem to have been about as ignorant of its nature, and as much astonished at its effects as the Charlestonians were when it was belched upon their rebel streets from Gilmore's guns, five miles distant.

The original invention of the "Greek fire" is, however, much older than even that siege of Constantinople, though that is the first recorded instance of its use as a warlike missile. Its origin is attributed to Syria and to Egypt. But China, in her wonderful pyrotechnics, seems to have possessed the secret of its composition long before either of the others. The Greek fire then in use appears to have been composed bitumen, sulphur and pitch, and to have been cast forth as fire balls, around arrows, javelins, around which flax, saturated with this compound, was twisted. Subsequently the Romans employed it by emitting it violently from long copper tubes set on the brows of their fire ships. For 400 years the secret of its composition was religiously guarded among the Romans, divine vengeance being imprecated upon whomsoever should divulge the secret.

The Mohammedans finally obtained it by means of a deserter, and used it against the Christian Crusaders in the wars of Syria and the Holy Land. A French historian of that time describes the fire as coming through the air like a winged long tailed

dragon, about the thickness of a hogshead, with the report of thunder and the velocity of lightning.

After the 14th century, and when chemistry came to be better understood, other materials were employed in forming what was still demonstrated the "Greek fire." Benzole, and potassium, and benzole and phosphuret of calcium have been used for making the Greek fire. This is highly inflammable, and inextinguishable by water. Phosphorus added to this increases its capacity for communicating the combustion to other objects. Oil of petroleum may be used instead of benzole. Phosphorus and the chloride of sulphur also combine to compose this species of fire; and the compound not only ignites, but its ignition gives out a most abominable odor, a stench absolutely insufferable. We do not know definitely which of those ingredients composed the "Greek fire" that fell upon Charleston the other day. But if it were of this last, then no one would wonder that Beauregard should "protest" against the use of such a "villainous compound" as too much for any Christian nose to endure. No wonder he craved a forty hours truce. But Gen. Gilmore refused even this boon, on the principle doubtless, that the best way to kill secession skunks of the Charleston breed was to stop them up in their holes and stink them to death.

FLORICULTURE.

MONROE HORTICULTURAL ASSOCIATION.

The Commercial gives the following proceedings of this active and useful Association conducted entirely by Ladies; where are the Men of Michigan?

Carnations.

The Carnations, of the order Caryophyllaceæ, a species of the genus Dianthus. The species (*D. Caryophyllus*) is supposed to be the parent of all the beautiful varieties of the Carnation; and is occasionally found in a wild state in Britain on old walls.

Over four hundred sorts are mentioned by florists, distinguished—mostly by some peculiarity in color. Few flowers are more admired in the Mother Country, and even in this, they have had their share of admirers.

The Greeks, alluding to its pre-eminent beauty and fragrance, called it the flower of Jove. It is indeed remarkable for its beauty and fragrance, and although it will often stand the severest cold, it is necessary that it should be protected in winter, that it may be had in the perfection of beauty.

If possible these plants should be framed during the winter; however they will keep passably, if carefully covered with leaves. While in the frames, they require plenty of fresh air; and the earth about them should be stirred frequently. Those that are intended to be kept in pots should be repotted about the first of March. Care should be taken that they have the timely support, required by plants that have heavy heads, and slender stems.

In order to make them flower well, if the weather is dry give them frequent watering at the roots. In May they may be either planted out in beds, or removed to larger pots for flowering.

Busat says, "If Carnations are desired to flower strongly, cut off all the buds except three, leaving the uppermost, and any other two of the largest." If laid about the end of June, they will be rooted and fit for transplanting by the last of August. Great care should then be taken, to preserve as many of the root fibres as possible; indeed it is said, that the thrift of a plant, depends upon the manner in which it is moved, rather than the time of transplantation.

Carnations are also propagated by cuttings, and some sorts are raised from seed. Rich loam mixed with sand and vegetable mould is best adapted to their cultivation. The Tree Carnation, commonly called the winter flowering Carnation, will thrive luxuriantly in a soil of a loam, mixed with silver sand, and a small quantity of leaf mould.

Tre Carnations will supply an abundance of cuttings which should be struck about the middle of March as young plants, grow rapidly throughout the summer, and make by far the best specimens for winter blooming. If cuttings are struck near the close of summer they should be potted off and kept in a cool frame during the winter; care being taken to keep them rather dry.

The plants require but little care during the summer: they merely want watering, and sometimes stirring up the surface soil.

PROPAGATING BY LAYERS AND CUTTINGS.

The process of layering Carnations is necessary, in order that each year their fragrant beauties may be numbered among our garden flowers; for unless they are regularly propagated they are soon lost.

Layering is mostly performed during the months of July and August. Having first been provided with a quantity of hooked twigs, select the straightest and lowest shoots of the plant you wish to layer, and trim off the lower leaves, then about an inch below the reserved leaves, cut out a small chip just below a joint, on the underside of the shoot, and about half way through it, and pass a knife upward through the joint from the notch into the earth, keeping the head of the layer upright a few inches out of the earth; in this position peg down the layer with one of the hooked twigs, and cover with soil below the reserved leaves. Keep the earth a little full around the plant, to retain longer the water that may be applied. A cloudy day should be chosen for layering Carnations. Cutting from Carnations should be struck about the middle of March. They should be cut off, as near the joint as possible, without injuring it. Half ripened young shoots are best, as they strike quicker than old wood.

Before taking cuttings the plant should be placed in the warmest part of the green-house, if this is done the plants are excited to grow, and if the cuttings are then taken off, they will strike root more readily. To insure cuttings taking root, they must be struck in a little heat, but the cutting pot should not be covered with a glass, for if this is used the cuttings will damp off. After the cuttings are well rooted, they should be potted singly in four inch pots, and kept in a rather close and moist atmosphere until fully established, when they should be gradually hardened off in a cool frame.

The cutting pots should be prepared by first placing pebbles in the bottom, over which place rough fibrous peat or turf; then take loam and silver sand to equal proportions and fill in within an inch of the rim. Complete by filling up with silver sand and a small quantity of charcoal.

JASIN J. HOBSON.

Repotting of Geraniums.

Geraniums and Pelargoniums require frequent repotting into larger and larger pots. According to Mrs. Loudon, this should be done early in the Spring, that the plants may become larger and luxuriant before producing their summer blossoms.

In this country the plants will doubtless have borne and lost their blooms by July or August, when they should be cut down nearly even with the ground; at least all wood of two years growth, should be cut off. This will produce a large quantity of fine healthy shoots by autumn, which may be trimmed out, and the superfluous ones used as cuttings, to produce new plants for the coming season. After pruning, the plants should be repotted. Busat does not think it necessary to transfer to larger pots at this time, but only to change

the outer earth, taking care not to disturb the ball of soil which contains the roots of the plant. To do this the plant may be carefully removed from the pot, retaining the soil about the roots, then emptying the pot of the remaining earth, arrange for drainage, place the ball of roots again in the pot and fill up with new soil. If this is done in the open air, a cloudy day should be selected. Water them very slightly until they begin to grow and on no account allow the earth to become saturated with moisture as it thereby loses its freshness, even if allowed to dry again quickly. While they are growing turn them often, that they may not become one-sided in the sunlight.

To those who cultivate flowers in rooms, summer blossoms must be almost a matter of indifference compared with the pleasure of having the cheerful companionship of healthy, luxuriant plants during winter. Consequently, particular attention should be paid to repotting, pruning and everything which can possibly assist to produce vigorous winter growth in them.

Mrs ANNETTE HUMPHREY.

Propagation of Pelargoniums.

Pelargoniums may be propagated from cuttings, whenever the wood is sufficiently ripened. When the plants have made good growth, which is generally the case between the middle of July and the first of August; harden them off; by withholding water, giving only sufficient to maintain in health, the wood already formed. Give them for ten days full exposure to air, shading from the hottest noon day sun, until foliage is somewhat hardened, which will be in from three to four days. Within the given time with proper management the wood will have become sufficiently ripe for striking. Prepare small pots with a drainage of charcoal broken to the size of green peas covered with a layer of dry moss or other fibrous matter, fill them with a turfy mould settle it firm by knocking the pot on a board, then with a round stick size of a pencil make a hole in the centre one inch deep, fill this with powdered charcoal passed through a fine sieve and pure "lake sand," in this insert the cutting, settle the sand around it firm by dropping close to the side of the enting three or four drops of water which will be sufficient to last three or four days. They will be more sure to grow if the pots are plunged in a bottom heat of from 65° to 70°. Be careful they do not "damp off" for want of air, and give water in the same manner or with a fine rose water, not only when absolutely needed. All cuttings require a partial shade in a hot sun.

E. F. HASKELL.

Taking up Bulbs.

A correspondent of the Prairie Farmer gives information about bulbs, as to whether it is absolutely necessary to take up every year tulips, hyacinths, crocus, gladiolus, communis and other hardy bulbs.

If for mere display, that is for private gardens, it is not necessary. For those who raise to sell it is best, as by so doing they are enabled to have their bulbs in a better state of shipment, besides, that they propagate finer individual bulbs by so doing. The usual way for this purpose is, to take up as soon in the summer as the foliage dies down; dry the bulbs somewhat, and then preserve them in bags or something similar until the fall, which is the time for planting. The small are transplanted for next year's crop. Much larger bulbs will be got this way than to let them occupy the same place without removing.

For private gardens they may be left for two or three years without removal, and will generally be more satisfactory after than the first year; because the bulbs will have multiplied and each bunch send up several flowers instead of singly, as will be the case with those the first year. So far as each individual flower is concerned, they will not be so fine perhaps, but as effect of the whole is of more importance, this is generally overlooked. Except planted a large distance apart, it will be advantageous to replant, at least every three years, or they will get to thick and grow up too near the top of the soil.

Those who delight in a fine display of spring bulbs, should not spare the manure, which should be quite rotten and well incorporated with the soil. A soil approaching a sandy nature is the best, and when sand is lacking naturally, some river or other sand may be added with beneficial results.

NATURAL HISTORY.

THE GUINEA FOWL:

Its History, Habits, Characteristics, &c.

The Guinea fowl was known to the ancient Greeks and Romans, and, as its name indicates, it is of African origin. It was noticed by Aristotle, by Pliny, by Varro and by Columella, one of the earliest writers on husbandry. In the Middle ages we lose all trace of it; no writers of their times appear to notice, nor can we distinctly point to the period of its introduction.

A wild race of these birds is found in the West India Islands, and are supposed by many to have been introduced there by Columbus; by others, to have been imported from Guinea. It was introduced into America at a very early period.

The common Guinea fowl appears to be dispersed through an extensive range of Africa. In its domestic state it retains almost unaltered its original habits; it is restless, addicted to wandering, and impatient of restraint. In its rapid mode of running and its short flight when forced to take wing, we are forcibly reminded of our partridge.

We have frequently called attention to the rearing and keeping domestic poultry, not altogether as a money making business, but as a source of enjoyment and a useful branch of domestic economy.

Notwithstanding the attention heretofore paid to the common poultry, no one that we are aware of, has ever attempted to rear and keep Guinea fowls in any considerable numbers, though we have heard of a Jerseyman, who had been very successful and made himself rich from the sale of the eggs of Guinea hens in the New York market.

Of all known birds it is believed the Guinea, hens are the most prolific of eggs. From their great aptitude for laying, which seems a natural propensity, we are inclined to believe that they may be made profitable to keep for that purpose, provided suitable accommodations are afforded them. They dislike confinement, and will not thrive unless they have plenty of room to roam in. They are naturally shy and restless in their disposition, and seek to make their nests in dark and secluded places—hence the necessity of giving them, if possible, an inclosed wood lot with plenty of under brush.

The Guinea fowl differs from all other poultry in its being difficult to distinguish the male from the female; the chief difference being in the color of the wattles which are more of red hue in the male and tinged with blue in the female. The male has also more of a stately strut. Another rule is, the hen alone uses the call-note "come back," "come back," accenting the second syllable strongly from which they are often called "comesbacks." The cock has only the harsh, shrill cry of alarm, which, however, is also common in the female.

The Guinea cock is no moron, but like the pigeon and partridge, is satisfied with one mate. He is, however, very polite and attentive to his mate and in this respect shows much better manners than the Peacock. It is, as every one knows, a noisy bird, having a very disagreeable and peculiar call-note, and is turbulent and restless, continually moving from place to place, domineering over the whole poultry-yard, keeping all in an uproar and alarm by its pugnacity and petulance.

From the earliest times to the present, the Guinea fowl has been no great favorite with poultry keepers, and but few patronize them; and it is one of those unfortunate beings which from having been occasionally guilty of a few trifling faults, has gained a much worse reputation than it really deserves, as if it were the most ill-behaved bird in creation; whereas it is useful, ornamental, and interesting during life, and when dead, if young its flesh is tender, very superior and game-like, much resembling in flavor our partridge, and a desirable addition to our dinners at a time when all other poultry is scarce and out of season. It is important, therefore, to the farmer, who cultivates poultry for the profit of its products in market to know and to be able to obtain the best and most profitable kind.

No domestic fowl produces chickens so pretty and interesting when first hatched as the Guinea fowl. Their orange-red beaks and legs, their Zebra-striped down, and their extreme

sprightliness render them most peculiarly attractive. They are so strong and active when first hatched as to appear not to require the attention really necessary to rear them. Almost as soon as they are dry from the moisture of the egg, they will peck each other's toes, as if supposing them to be worms, will scramble with each other for a worm, and will dominate over any little chicken that may happen to have been hatched in the same nest with themselves. No one who did not know, would guess from their appearance, of what species of birds they were the offspring.

"The Guinea fowl," says a writer, "is delicate eating, and is in season when chickens and partridges are scarce. The young chickens are interesting little creatures, sweet musical voice, very lively, and resemble little birds. They must be treated in the same manner and with the same kind of food as young turkeys; and they must be kept dry and warm. They are great devourers of all kinds of insects, but should never be allowed to visit the garden, as they are very fond of the blossoms of beans and other young and tender vegetables."

The great drawbacks to the rearing these fowls are the vigilance required to watch for their nests, and the harsh and disagreeable screaming of their everlasting cry; still they are useful, as by their continual clamor watchful nature in protecting the other poultry from the hovering hawks—for which reason, if no other, a few should always be kept in every poultry yard. At night, if any footsteps distract them they sound the alarm by their loud cries, and are sure to give notice that a trespass is committing.

In fattening they should be shut up in a house for a couple of weeks and fed four or five times a day with corn-meal, moistened with milk and lard. They pine and fall away if confined any length of time. They should, like the partridge and prairie hen, be sent to market in their feathers.—*C. N. BARNETT, in the American Stock Journal.*

Some Facts Concerning Reptiles.

Of old, when the waters that covered the earth had subsided, there were, according to tradition and the limited discoveries of geologists, left stranded amid the ooze and mud certain monsters or reptiles which were hideous and repulsive in form. These are said to have been *cheloniens* or those belonging to the tortoise family; *sauroians* or lizards and *ophidians* or serpents. Reptiles do not undergo any change of nature and are always air-breathers, although cold-blooded; they have neither mammae nor breasts for suckling their young, nor yet hair or feathers. By the two former peculiarities they are distinguished from fishes and batrachians, and by the two latter from mammals or those which do not suckle their young and from birds. Reptiles breathe air by lungs, like birds and mammals, but the pulmonary circulation is incomplete, only a part of the blood being sent to the lungs; while from the ventricles of the heart a mixed arterial and venous blood is sent to the other organs. The number of species of reptiles is set down at 2,000, or less than that of mammals or birds; most of them are terrestrial, but some, it is said, can sustain themselves in the air. Some reptiles live habitually in the water, swimming by means of flattened fins (as the turtles) or by a thin tail, as in crocodiles; others dwell in subterranean burrows.

Every degree of speed is found among reptiles, and while some are fitted for running over dry sand, others are better adapted to climbing trees or ascending smooth surfaces. The means of defense with which nature has provided reptiles are many, and, although their appearance is sufficient to terrify most animals, yet they are furnished with other safeguards, which render an attack upon them, to say the least, unpleasant. The crocodile and turtle are sufficiently protected against ordinary assault; the agility of the lizard serves him well, for he darta into his hole at the expense, possibly, of his tail, which is soon reproduced. The great boa can prevail over every foe but man, and the venomous fangs of other serpents and the bristling spines of the horned lizard are amply sufficient to guard them from the attacks of profuseous and other ill-disposed members of the animal kingdom. Reptiles are very useful to man in various ways; some fulfill the law of their

being by catching insects, while still others serve as food, or supply material useful in the arts. The muscles of reptiles are red, though paler than in mammals and birds; they preserve their irritability for a long time after death. Tortoises have been known to live eighteen days after their brains have been removed. Life seems in a marked degree independent of the brain, as they vegetate rather than live; and being comparatively insensible to pain, they grow slowly, live long, and are very tenacious of life. The sense of touch is dull, whether exercised by the skin, toes, lips, tongue or tail; taste must also be dull, as the food of reptiles is swallowed without mastication. Reptiles eat and drink comparatively little, and are able to go a long time without food; most of them are oviparous, their eggs being hatched by the heat of the sun. The young when born are able to provide for themselves, and are generally indifferent to the mother, who has neither the joys nor the sorrows of maternity.—*Scientific American.*

The Spider.

THE SPIDER as an insect is a friend to agriculture, although it is considered to be disgusting and poisonous, and many there are that will start back and screech at the sight of a spider, as if they were a venomous reptile. This probably is, because tradition and superstition have got possession of our senses.—We have been bitten by spiders, and received no more injury than from a flea; yet there may be some spiders whose bite is poisonous. The spider has eight legs and eight eyes; it sheds its skin like the snake; it sometimes survives the winter in a torpid state: it is like other beasts of prey, capable of enduring hunger a long time; its food consists of flies and insects which otherwise would devour our crops. Look at the multitude of webs in the morning after the fog has left the air, and you will see your field nearly covered, and all these little nets are set to catch insects. How many thousands are daily destroyed? Yet prejudice has got such a hold of our minds that we frequently step aside to crush them, and destroy their nest. Whoever is guilty of doing so, is not acquainted with the history of the spider, or they act against their own interest.

OPINIONS OF THE STATE PRESS.

MICHIGAN FARMER.—This excellent agricultural paper has greatly enlarged its sheet, and diminished the size of its page. The July number contains 50 pages. It offers some splendid premiums for new subscribers. Farmers! send for one.—*Grand Haven Union.*

MICHIGAN FARMER.—The Michigan Farmer comes to us enlarged and improved. We believe the Farmer is now placed on a permanent footing, and will be found to be just the Agricultural journal for the farmers of this State.—*Santico Jeffersonian.*

MICHIGAN FARMER.—The Farmer for July is at hand, it presents a valuable list of contents. Under its new Managers it offers inducements to the farmers of Michigan, that they should not neglect to obtain.

- 1st. It is an agricultural Journal.
- 2d. It is an organ of the State agricultural Society.
- 3d. It is the only agricultural Journal in the State.

The above are reasons enough why it should be supported liberally.

THE MICHIGAN FARMER for July, comes to us in a new shape approaching the Magazine Style, having two broad columns to a page and the number of pages increased to 50. It is also considerably enlarged. The July number is the commencement of a new volume, and presents an interesting and valuable table of contents. Our Farmers should duly appreciate and support it. Drawings of the three prize strawberries given as premiums to subscribers to the N. Y. Tribune accompany this number—the Elsworth printed in colors, natural size and causing a provoking watering of the mouth to look at it. The Farmer is published monthly at Detroit by Messrs. Bond & Snyder for one dollar a year.—Get it farmers, by all means. It will prove a valuable investment.—*Hudson Herald.*

DOMESTIC ANIMALS.

For the Michigan Farmer.

DOMESTIC ANIMALS.

BY SLOW JAMIE.

No. 8—The Reindeer.

It has been to us a matter of surprise that this useful animal, could live, give milk, and grow fat, on such meager food as moss; but it must be remembered that in the reindeer's country, the moss is very glutinous and rich in nourishment. In southern countries trees and plants grow succulent and large, but the farther North you go, whatever will grow, you find much more substantial for food. The potato is a native of South America. There it bears a luxuriant vine with abundant and beautiful blossoms, but removed to Ireland, and other cold countries, the potato at the root, which was originally small and watery, becomes large, starchy and nutritious. Water fowls too that go away to the far North to summer, always come back plump and fat.

Men first inhabited the warm or temperate climes, and it was not until the population was increased that they betook themselves to cold regions. Yet, when forced to the cheerless north, they found it better than they expected. Along the seacoast they found abundance of fish and a great variety of seals. These were all remarkably fat, and they found, that the cold weather gave them a great appetite, not only for fat meat, but for oil. They found also, that this kind of food made them better able to stand the cold.—Thus the inconvenience of every country is balanced by some advantage. In Northern Europe they found a kind of deer roaming in great herds. These they killed by throwing spears at them. Their flesh afforded food, and their skins, covered with soft warm hair, comfortable clothing. They caught the young ones and tamed them. To their great surprise and delight, they found that they could be broken to work, as well as the horse or ox.

The harness which these humble people used, was of a very simple description. It consisted of two reins. One rein was tied around the deer's neck and passing along under his breast, was fastened to the sledges. The other was tied to his horns, and used for a line to manage him. And so the animal got to be called the Reindeer.

There were two kinds, a large and small one, both larger than our common deer, but not so large as the stag of Europe. The smaller ones when tamed were kind and gentle, the larger not so manageable. The former were so much sought after, that at last they were all caught, and the two kinds were known as the wild and the tame.

Of late years they are beginning to seek after the large kind more, and break them to work, because they can travel so much farther and faster than the others. However, it is said that they sometimes get unruly and turn back on their driver, and he is obliged to hide himself under his sledge, from their rage; but I suppose such animals are badly trained.

In some parts of Lapland the Reindeer's milk is the principal food during the summer. A deer only gives about a pint at a time, but they keep so many of them, that they have an abundance. In that country they are annoyed by with gnats, which come in perfect clouds. So when they go to milk, they kindle a little fire to raise a smoke. The deer crowd around the smoke to get rid of the gnats, and stand still till they are milked. A man approaches a deer with his vessel, gives her a slap on the hip, she instantly lifts her leg, and thus he gets at her diminutive udder. The Lapps being little men, stand on their feet while they milk. They make but little butter, and either drink the milk sweet or make it into curds, or cheese. They save all their whey and count it a peasant drink.

The gnats and flies which annoy them so much, are still of great advantage, by attracting great flocks of water fowl to feed on them. While they have plenty of milk they never touch these birds, but in the fall, when it gets scarce, they kill them for food. The birds not being disturbed during summer are quite tame, so that they can knock them over with poles. They generally shoot them with cross-bows. They are found fat and good eating. When the birds leave them, they kill the fattest of their deer for winter use. They save the blood and mix it with marrow for black-pudding. They wash and cleanse out all the inwards for tripe, and this they are fond of. The sinews they slit and use for sewing thread. The horns they sell to the Swedes, who make glue of them. The tongues are also dried and exported for sale. The rest of the flesh they retain for their own use. The skins they manufacture both into garments to wear, and robes to sleep and ride in. They export some of their hairy coats, and get a high price for them.

Their deer do not come in till May. If their venison be exhausted before that time, they find an abundance of fish in their waters, and they live almost entirely upon these in order to spare their deer. The female is very fond of her young, and when a fawn is killed, it is often necessary to lay it before her, till she is satisfied that it is dead.

Then she will go off to feed. Otherwise she would go bleating around the cottage till half starved. In obedience to instinct she is greatly concerned for the young while she supposes it to be living, but does not fret about it when dead.

Breeding and Rearing Dairy Stock.

At a late meeting of the Little Falls Farmers' Club, a discussion took place on the question—“What is the best manner of selecting calves with reference to making good milkers?” The following are some of the points which were brought out:

Mr. Lansing read an essay upon Dairy Stock, its selection, &c., in which great interest was manifested by the members. He reviewed the different breeds, pointing out good points with a distinctness which showed great nicety of observation. He spoke highly of the Ayrshire, and esteemed as a model a cross between the Ayrshire and the common Dutch cows. He advised the practice of raising half a dozen or more calves annually from the best cows in the dairy, to supply the place of the poor milkers, &c., turned off to cattle dealers. By following the system of raising our own stock from the best milkers, and those possessing good points as to form, he believed the dairy stock of the county could be improved so as to stand second to none.

Mr. Willard thought dairymen should introduce the Ayrshires into their herds, and raise their own stock. In this manner better stock could be obtained than by purchase. In buying, dairymen looked more to the immediate price than the ultimate profit of the cow.

Mr. Fenner preferred to raise his own stock. Cows which were generally brought to this market to sell, were bought without any reference to their quality as good milkers.

Mr. Reed did not think it profitable to raise stock unless it could be of an extra quality. Great pains should be taken as to selecting the cow, both as to her milking qualities and form.

It was asked how long calves should be fed upon milk to make good cows. Mr. Green said he had fed generally about six weeks, and then turned out to grass, with no extra feeding until fall. It was the opinion of the members generally that six weeks was sufficient.

Calves to winter well, require root feed. Carrots were spoken highly of, as affording proper nourishment. Corn used in a raw state was not considered beneficial for cows; but made into a sort of pudding or mush, was undoubtedly good.

Mr. Willard's experience in feeding corn meal had not been satisfactory. Several members had fed oat meal with good results.

Mr. Willard said nothing was gained by over-stimulating in the spring, as there would be a corresponding decrease of milk during the latter part of the season. Moderate feeding while in milk was favorable; but excessive feeding was prejudicial to the result. Cows generally give their maximum amount of milk when five years old. A

vote as to the advantages of dairymen raising their own stock, resulted unanimously in the affirmative.

Sheep Management.

This last winter was very hard on all kinds of stock, especially on sheep; and a great many of them died from improper care in the fall. There are three things which every producer of wool should observe, to insure success in raising sheep. 1st. the time the sheep should lamb; 2nd. weaning the lambs; 3d. the condition of the flock in the fall.

Every farmer should endeavour to have his lambs come about the 1st of April—unless he has got a warm shelter, then February will do; he then can shear those lambs about the 20th of July, which will free them from ticks, (which help to make poor lambs.) In having lambs drop before the 1st April, without warm shelter and good care, there is great danger of losing a large percentage.

About the middle of August the lambs should be separated from the balance of the flock; and turned into a good clover lot, or a cornfield. The latter is preferable. Nearly every farmer has a cornfield in which his sheep can run; they will not injure the corn at this season of the year, their fleeces have now become a burden to them, and the corn will afford them good shelter from the heat of the day. Bear in mind that the condition of your sheep govern the amount of the fleece in the spring.

The 1st of September, the ewes should be turned in with the lambs; let the buck keep the company of the wethers until the proper time to turn him in with your ewes, and if the farmer could turn about half a dozen in with the buck every other day he soon would see the advantage.

Of sheep that are in good condition and health in the fall, there is no need, with common care, of losing more than one per cent, in wintering. I have noticed that some, through their uneconomical craftiness in this country, rob the sheep of their woolly coat, the 1st of April; the result is, that they loose frequently a part of their flock; the middle of May is full early to clip the fleece. One word more: It is a general custom, as soon as the clip is off, to rush it into market, not only with those whose pecuniary circumstances require it, but with others also. The fall market is generally from 30 to 40 per cent better than the spring. This year, I am glad to see farmers stand up and ask for their rights. That is to say, give me my price or I will keep my wool.—N. W. WHITNEY, in *Prairie Farmer*.

MICHIGAN FARMER.—We are in receipt of the *Michigan Farmer* for July. This is the first number of a new series. It is got up in good style, and a journal of it has convinced us that it well deserves the patronage of our farmers.—Terms, \$1 per year.—*Port Huron Commercial*.

Poultry in Frosty Weather.

There is something exhilarating in frost. When the early morning breaks on the earth covered with rime, and the hard ground seems to spurn the foot that treads on it, and the sun rises like a disc of burning copper, there is something cheerful about it. Nature has donned her masquerade dress of white. Your horse cannot contain himself; and the steady old friend for some months past, content to shake his head or whisk his tail, as the only answer to what a grand daughter of ours calls a "good cut o' the whip," now seeks to devour space, and to try conclusions with your strength or that of your reins. In like manner your tried friend, the old dog, gambols, and, in the gleeomeness of his feelings, he picks up a shred of cloth in the field, and shakes and tosses it for very wantonness. The appearance of real winter is then a holiday for many, but (ah! those buts) not to all. It is none to the poultry. Water is frozen; the ground is so hard they cannot scratch; there is not animal of any kind on its surface; and they must depend on their owner for everything they want. See they lack nothing. First, they must have water. Few people have any idea of the suffering caused to birds by the lack of water. Their power of maintaining life on the smallest possible quantity of food is wonderful, provided they have water; but a practised eye can tell in a dead fowl or pigeon whether it suffered or not from thirst. The skin becomes hard, dry, and red; the flesh contracts, as it were and becomes brown, and the whole body looks as if it had been suddenly shrivelled or dried up. You must bear in mind they require more food and better than they do in milder weather; and, if you can, let them have a greater variety. They want substitutes for the worms and insects. Now, the scraps of meat and fat from the table should go to the fowls. Save the drainings of all the glasses, pour them together, and sweep all the crumbs, and odd corners of bread into it. Feed the birds often, and, if there is snow, sweep a clean place, and feed there. Never feed any kind of bird in such a manner that they shall pick up snow with their food; it is a strong medicine to them. The lark that fattens in two days on the white hoar-frost becomes a wretched skeleton after two days' snow.—*Cottage Gardener*.

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A new volume of the *Michigan Farmer* has just been commenced. It will hereafter be issued monthly, in the form of a magazine, at \$1.00 a year. It is the organ of the State Agricultural Society, and the only agricultural journal published in Michigan. It is a valuable work, and well worthy of the patronage of farmers. Bond & Snyder, publishers, Detroit.—*Bay City Press and Times*.

POINTS OF EXCELLENCE IN CATTLE.



Skeleton and outline form of a Bullock, showing the various points referred to in points of excellence.

A, Occipital Bone; B, Frontal Bone; C, Horn; D, Eye; E, Nose; F, Lip; n, Face; m, Cheek; H, Dew-Lap; M, Brisket; N, Chest; I, Neck; k, Shoulder-blade; b, Shoulder-points; L, Crops; Q, Back; R, Loin; S, Hips, or Hucks, or Hooks; u, Thurl, or Whirl Bone, or Round Bone; T, Rump; W, Plates of the Belly; V, Flank; X, Cord of the Tail; O, Fore-arm; Y, Thigh; h, Hock; p, the Elbow; r, the Leg or Shank, Cannon Bone; x, Ear.

At the last annual meeting of the Executive Committee of the Michigan State Agricultural Society, the following classification of points of Cattle was adopted for the Judges of Shorthorns and Devons. They are the points adopted by the N. Y. State Agricultural Society, and have been found very useful.

Points of Excellence in Cattle, adopted by the Michigan State Agricultural Society, for the guidance of Judges at their Annual Fairs.

The numbers affixed to the points described, form the maximum that is to be allowed for each; and in proportion as the animal is deficient in any point, so will the judges decrease the number, even should nothing be allowed for that point.

Points which are characteristic, and therefore common to a breed, though very valuable in themselves, are marked comparatively low, because they are easily obtained and demand but little skill or attention on the part of the breeder;—nevertheless, an animal not possessing the characteristics of its own breed, must of necessity be almost worthless. On the other hand, it will be observed that points of less value, perhaps, in themselves, but which are characteristic deficiencies in the breed, or at any rate difficult to sustain

at their maximum excellence, are marked numerically high, as they go far to complete or perfect the natural excellence of the animal.

Again, for the above reasons it will be found that the same points, in different breeds, have different numerical values attached to them.

POINTS OF A SHORTHORN COW.

PEDIGREE—showing unbroken descent, on both sides, from known animals, derived from English herds, as found in the English or American Herd Books, and without this, an animal cannot compete in this class.

3 *The Head*—small, lean and bony, tapering to the muzzle.

2 *The Face*—somewhat long, the fleshy portion of the nose a light delicate color.

2 *The Eye*—is of great significance, and should be prominent, bright and clear—"prominent," from an accumulation of "adeps" in the back part of its socket, which indicates a tendency to lay on fat—"bright," as an evidence of a good disposition—"clear," as a guaranty of the animal's health; whereas, a dull, sluggish eye belongs to a slow feeder, and a wild, restless eye betrays an unquiet, fitful temper.

1 *The Horns*—light in substance and waxy in

color, and symmetrically set upon the head; the Ear large, thin, and with considerable action.

2 *The Neck*—rather short than long, tapering to the head; clean in the throat, and full at its base, thus covering and filling out the points of the shoulders.

14 *The Chest*—broad from point to point of the shoulders; deep from the anterior and dorsal vertebra to the floor of the sternum, and both round and full just back of the elbows; sometimes designated as by the phrase "thick through the heart." These are unquestionably the most important points in every animal, as constitution must depend on their perfect development, and the ample room thus afforded for free action of the heart and lungs.

5 *The Brisket*—however deep or projecting, must not be confounded with capacity of chest; for though a very attractive and selling point, it, in reality, adds nothing to the space within, however it may increase the girth without. It is, in fact, nothing more nor less than a muscular adipose substance, attached to the anterior portion of the sternum, or breast-bone, and thence extending itself back. This form, however, of the brisket indicates a disposition to lay on fat generally throughout the frame, and in this point of view is valuable.

4 *The Shoulder*—where weight, as in the Short-horn, is the object, should be somewhat upright and of good width at the points, with the blade-bone just sufficiently curved to blend its upper portion smoothly with the crops.

8 *The Crops*—must be full and level with the shoulders and back; and is, perhaps, one of the most difficult points to breed right in the Shorthorn.

8 *The Back, Loin and Hips*—should be broad and wide, forming a straight and even line from the neck to the setting on of the tail, the hips or hucks round and well covered.

5 *The Rumps*—laid up high, with plenty of flesh on their extremities.

2 *The Pelvis*—should be large, indicated by the width of the hips (as already mentioned) and the breadth of the twist.

The Twist—should be so well filled out in its "seam" as to form nearly an even and wide plain, between the thighs.

The Quarters—long, straight, and well developed downwards.

4 *The Carcass*—round; the ribs nearly circular, and extending well back.

3 *The Flanks*—deep, wide, and full in proportion to condition.

2 *The Leg*—short, straight, and standing square with the body.

3 *The Plates*—of the belly, strong, and thus preserving nearly a straight under line.

2 *The Tail*—flat and broad at its root, but fine in its cord, and placed *high up*, and on a level with rumps.

2 *The Carriage*—of an animal gives style and beauty; the walk should be square and the step quick; the head up.

15 *Quality*—On this the thriftiness, the feeding properties, and the value of the animal depend; and upon the touch of this quality rests, in a good measure, the grazier's and the butcher's judgment. If the "touch" be good, some deficiency of form may be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a soft, flexible and substantial feel, and when beneath the outspread hand it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which, however, becomes firmer as the animal "ripens." A thin, papery skin is objectionable, more especially in a cold climate.

2 *The Coat*—should be thick, short and mossy with longer hair in winter, fine, soft and glossy in summer.

3 *The Udder*—pliable and thin in its texture, reaching well forward, roomy behind, and the teats standing wide apart, and of convenient size.

POINTS OF THE SHORTHORN BULL.

As regards the male animal, it is only necessary to remark, that the points desirable in the female are generally so in the male, but must, of course, be attended by that masculine character which is inseparable from a strong, vigorous constitution. Even a certain degree of coarseness is admissible, but then it must be so exclusively of a masculine description as never to be discovered in the females of his get.

In contra-distinction to the cow, the head of the bull may be shorter, the frontal-bone broader, and the occipital flat and stronger, that it may receive and sustain the horn—and this latter may be excused if a little heavy at the base, so its upward form, its quality and color be right. Neither is the looseness of the skin attached to, and depending from the under jaw, to be deemed other than a feature of the sex, *provided* it is not extended beyond the bone, but leaves the gullet and throat clean and free from dewlap.

The upper portion of the neck should be full and muscular, for it is an indication of strength, power and constitution. The spine should be strong,

the bones of the loin long and broad, and the whole muscular system wide and thoroughly developed over the entire frame.

NORTH DEVONS.

Purity of Blood, as traced back satisfactorily to importations of both dam and sire, from known English breeders, or as found in the lately established Herd Book for North Devons, and without this, an animal cannot compete in this class.

4. *The Head*—should be small, lean and bony, the forehead wide, flat, or from a fullness of the frontal bone over the eyes, somewhat dishing; the face straight; the muzzle fine; the nostrils open; the lips thin and rather flat.
4. *The Nose*—of a light delicate orange-color.
4. *The Eye*—should be bright, prominent, and clear, but mild and gentle it is expression, as indicative of that spirited, but tractable disposition so necessary to cattle that must bear the yoke; a beautiful orange-colored ring should invariably surround the eye.
2. *The Ear*—thin; of a rich orange-color within, of medium size, with a quick and ready movement, expressive of attention.
2. *The Horns*—light, tapering, of a waxy color toward the extremity, and gaily as well as symmetrically placed on the head; the occipital bone narrow, thus bringing the base of the horns nearer together.
2. *The Neck*—of medium length, somewhat light in substance, very clean, and well set up on the shoulder.
14. *The Chest*—deep and round, carrying its fullness well back of the elbows, thus affording, by the aid of a springing rib, abundant internal room for the action of thoracic viscera, the heart and lungs, and that too, without an extreme width forward, and between the points of the shoulders, which might interfere with the action of the animal.

4. *The Breast*—it being assumed that it adds nothing to the internal capacity of the chest must not overload the breast, but be sufficiently developed to guarantee a feeding property, attended with a full proportion of fatty secretion.

4. *The Shoulder*—is, in this breed, a very beautiful and important point, and should in a degree approximate in form to that of the horse. It should take a more sloping position than is found in most other breeds, with its points less projecting, and angular, and the blade bone more curved, thus blending with and forming a fine wither, rising a little above the level line of the back.

3. *The Croup*—full and even, forming a true line with the somewhat rising shoulder, and level back, without either drop or hollow.

9. *Back, Loin and Hips*—broad and wide, running on a level with the setting on of the tail.

5. *The Rumps*—lying broad apart, high, and well covered.

2. *The Pelvis*—wide.

3. *The Twist*—full and broad.

6. *The Quarters*—long and thoroughly filled up between the hooks, or hip bones, and the rumps; with a good muscular development down the thigh to the hocks.

3. *The Flank*—Moderately deep, full and mellow in proportion to condition.

5. *The Legs*—not too short, and standing as square, and straight behind, as may be compatible with activity. The bone quite small below the hock and knee; the sinews large, and clean, with the fore-arm well-developed.

2. *The Carcass*—round and straight; its posterior ribs almost circular, extending well back, and springing nearly horizontally from the vertebra, giving, in fact, much greater capacity than would at first appear.

1. *The Tail*—at its junction, level with the back, long, very slender in its cord, and finishing with a tassel of white hair.

1. *The Color*—in its shades and degrees, is more or less governed by fashion; but in the Devon is always red. Formerly a rich blood-red was the favorite color, and a test of purity; and now a somewhat lighter color is in vogue, approaching rather nearer to that of the South Devon, which is a larger, coarser, stronger animal. In all cases the color grows lighter round the muzzle, while a dark mahogany color, verging almost to a black, and growing yet darker about the head, always was a very-questionable color for a true North Devon, more especially when accompanied by a dark nose.

1. *The Hair*—should be short, thick, and fine; and if showing on its surface a fine curl, or ripple, it looks richer in color, and is supposed to indicate a hardier and more thrifty animal.

1. *The Udder*—should be such as will afford the best promise of capacity and product.

3. *Carriage*—The Devons having, from their excellence in the yoke, another destiny besides that of the butcher's block, it is all-important the animal's carriage should indicate as much; but to obtain this, something of the heavy, inert, squarely moulded frame of the merely beefing animal must be relinquished for a lighter and more active frame.

15. *Quality*—On this, the thriftness, the feeding properties, and the value of the animal depend; and upon the touch of this quality rests, in a good measure, the grazier's and

the butcher's judgement. If the "touch" be good, some deficiency of form may be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a soft flexible and substantial feel, and when beneath the outspread hand, it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which however becomes firmer as the animal "ripenes." A thin papery skin is objectionable, 100 more especially in a cold climate.

POINTS OF THE DEVON BULL.

As regards the male animal, it is only necessary to remark, that the points desirable in the female are generally so in the male, but must, of course, be attended by that masculine character which is inseparable from a strong, vigorous constitution. Even a certain degree of coarseness is admissible, but then it must be so exclusively of a masculine description as never to be discovered in the female of his get.

In contra-distinction to the cows, the head of the bull may be shorter, the frontal-bone broader, and the occipital flat and stronger, that it may receive and sustain the horn—and this latter may be excused if a little heavy at the base, so its upward form, its quality and color be right. Neither is the looseness of the skin, attached to, and depending from the under jaw, to be deemed other than a feature of the sex, *provided* it is not extended beyond the bone, but leaves the gullet and throat clean and free from dewlap.

The upper portion of the neck should be full and muscular for it is an indication of strength, power and constitution. The spine should be strong, the bones of the loin long and broad, and the whole muscular system wide and thoroughly developed over the entire frame.

**Buy the Best! It is Cheapest
IN THE END.**



THE RAILWAY HORSE POWER WHICH TOOK
FIRST PREMIUM
New York State Fairs of 1860 and 1862.

As it has also at every State and County Fair at which the Proprietors have exhibited in competition with others. This they believe cannot be said of any other Machine exhibited at an equal number of Fairs.

COMBINED THRESHERS AND CLEANERS

Threshers, Separators, Wood Saws, &c.
ALL OF THE BEST IN MARKET.

These Powers produce more power, with less elevation, and are operated with greater ease to the team than any other, requiring very slow travel of Horse, being only about $1\frac{1}{2}$ miles per hour when doing good fair business, which is about 800 to 500 bushels of Oats per day, or half that quantity of Wheat or Rye.

The Thresher and Cleaner runs still and easy, separates the grain perfectly clean from the straw, cleans quite equal to the best Fanning Mills, leaving the grain fit for mill or market, and is capable of doing a larger business without waste or clogging than any other Two Horse Cleaner before the public.

For price and description send for Circular, and satisfy yourself before purchasing. Address

R. & M. HARDER,
COBLESKILL, Schoharie Co., N. Y.

STATE FAIR FOR 1863!

CITIZENS' PREMIUMS

FOR RUNNING AND TROTTING HORSES.

THORATED

COMPETITION open for all horses except George M. Patchen, and trotters of his class.

The National Horse Association of Kalamazoo, having decided to hold an annual meeting this season, from subscriptions by citizens of the State, made for the purpose of promoting improvement in horses, offer the following premiums, under the auspices of the State Agricultural Society, to be competed for during the last day of the State Fair.

CITIZENS' PREMIUM FOR RUNNING HORSES.

For the best horse in a race of mile heats, to be conducted according to the rules of the National Horse Association, of Kalamazoo.

For the second best horse, do do do do do do

For the third best horse, do do do do do do

To make a race there must be at least three entries, and with each entry an entrance fee of fifty dollars will be required to be paid to the Secretary of the Michigan State Agricultural Society, at the time the entry is made.

CITIZENS' PREMIUM FOR TROTTING HORSES.

For the best horse in a trial of mile heats, best three in five, to be conducted according to the rules of the National Horse Association, of Kalamazoo.

For the second best horse, do do do do do

For the third best horse, do do do do do

To make a trial there must be at least three entries, and for each entry an entrance fee will be required to be paid at the time of entrance to the Secretary of the Michigan State Agricultural Society.

Entries to be made at the office of the Secretary of the Michigan State Agricultural Society, at Kalamazoo, at any time previous to noon, Thursday, Sept. 24, 1863.

Horses will be called to the stand at two o'clock, on Friday, Sept. 25.

By order of the Executive Committee.

ATLANTIC CITY, N. J.—**B. VOLLETT**, President.

R. P. JOHNSTONE, Secretary. ad no 312001
Office of the Michigan State Agricultural Society, Kalamazoo, Sept. 11, 1863.

LANCASSTER WHEAT.—This is a wheat Ex. President Buchanan introduced into this country when he was our Minister at the Court of St James; he then sending it home for his farm in Lancaster county, Pa.; and hence its name. It consists first in its yielding better than anything in the country; second that it has as large and plump a berry as the best varieties; and third it is believed never to have been injured by the fly. It is in considerable demand, and quite a number of farmers have raised it in Indiana.—*South Bend Spirit of the Times.*

FRUIT & ORNAMENTAL TREES.

WILLIAM ADAIR,

DETROIT, MICHIGAN.

OFFERS for sale his large and varied assortment of Trees and Plants. Particular attention is invited to his large stock of **PEAR TREES**, both standard and Dwarf, which are very thrifty, all worked on French imported stocks. 50,000 valuable trees on hand.

HARDY GRAPE VINES,

Anna, Concord, Creveling, Diana, Delaware, Rebecca, Hartford Prolific, Rogers' Hybrids, (10 varieties) and many others. The ADIRONDACK can be supplied in limited quantity—the others by the Dozen, Hundred, or Thousand, also, a good stock of FOREIGN VINES for cultivation under glass.

CURRENTS, GOOSEBERRIES, BLACKBERRIES, RASPBERRIES, STRAWBERRIES, &c.

EVERGREEN TREES,

Several thousand of large size and fine specimens, viz: Norway black, white and Hemlock Spruce, Balsam Fir, Scotch, Austrian and white Pines, Arbor Vitae, Red Cedar, Swedish and Irish Junipers, Silver Fir, Savin, &c.

ROSES,

Hybrid Perpetual, Moss, Climbing, Bourbon, Tea, Noisette.

GREEN HOUSE AND BEDDING PLANTS, with much that it is impossible to include in the limits of an advertisement. Address as above.

September, 1863.

DETROIT
NURSERY AND GREEN HOUSE.

WE have a large stock of FRUIT TREES of all descriptions, and can supply those who wish with trees of extra size. Also ORNAMENTAL Trees and Shrubbery of all kinds and sizes. A large assortment of EVERGREEN TREES of all the hardy varieties. Hybrid, Perpetual, Ever-blooming and Climbing ROSES, &c.

10,000 DELAWARE GRAPE VINES!!

Concord, Hartford Prolific, Creveling, Elsingburg, Logan, Union Village, Allen's Hybrids, Taylor, or Bullet, Hyde's Eliza, Diana, Northern Muscadine, To-Kalon, Isabella, Catawba, and many others in cultivation.

FOREIGN VARIETIES OF GRAPES,

Currants, Gooseberries, Raspberries, Blackberries.

Triumph d' Gand & Wilson's Albany Strawberry Plants.

Houghton's Seedling Gooseberry, the only kind perfectly free from mildew. Hardy Herbaceous Perennial Flowering Plants, BULBS of all kinds, &c., and a general assortment of

GREEN HOUSE PLANTS!!

Our trees and plants are all in good condition, and we will sell them in large or small quantities on as liberal terms as any nursery of established reputation in the country.

Catalogues furnished upon the receipt of a postage stamp.

Address

HUBBARD & DAVIS, Detroit, Mich.

September 5, 1863.

Bulbs for Fall Planting.

MY ILLUSTRATED DESCRIPTIVE BULB CATALOGUE for the Autumn of 1863, is now published and will be sent free to all who apply by mail. It contains a list of the best

Hyacinths, Crocuses, Tulips, Crown Imperials, Snow Balls, Lilies, &c. with prices. Address

JAMES VICK, Rochester, N. Y.

TREES! TREES!!

A large supply of

DWARF APPLE, & STANDARD & DWARF PEAR, and PEACH TREES.

AND GRAPES, including all the new approved varieties. Also a full variety of

BEST NURSERY STOCKS,

generally. All for sale CHEAP at the

SYRACUSE NURSERIES,

Catalogues furnished to all applicants, who enclose a stamp to prepay postage.

W. BROWN SMITH, Proprietor.
Syracuse, N. Y., Sept 1, 1863.

VALUABLE INVENTION.

GILL'S PATENT

FRUIT AND POTATO PRESSER.

[PATENTED, MARCH 4, 1862.]

IMPORTANT TO FARMERS & TO FRUIT AND POTATO PACKERS.



This valuable improvement which has been extensively used in Western New York, for the past two or three years, was patented since March 6th, 1862, and is now offered to Fruit Growers and dealers as the best article that can be had for Packing and Pressing Fruit, Potatoes, &c. This Presser is strong, durable, and those using it consider it indispensable.

For sale by the subscriber, AT BATTLE CREEK, Mich.

All persons are cautioned against manufacturing or selling this Presser without obtaining the Right, or purchasing of the undersigned, who is the sole owner of the Patent in Michigan; and any one infringing will be prosecuted.

COUNTY AND TOWN RIGHTS FOR SALE.

For full particulars see Circumstances.

ISAAC C. MOTT, BATTLE CREEK, MICHIGAN.

For sale by GEORGE BEARD, under the Russell House, corner of Woodward and Michigan Avenue, DETROIT.

WOOD SAWING MACHINE.



PATENT FOR THE GUIDE APPLIED FOR.

Come and buy you a GOOD WOOD SAWING MACHINE, that will save you more hard work than anything else you can buy for the money. They are simple and cheap—costing

ONLY \$100 FOR A GOOD HORSE AND MACHINE.

Ready to saw, with saw guide to steady the saw when entering the Log, and when out so that you do not have to stop the motion of the team to roll up the Log and start the saw in, and everything complete, that can be worked with two or four horses, and saw twenty-five or thirty cords a day. All manufactured at home, and can be repaired on short notice. Address

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86 CEDAR ST. - - - NEW YORK CITY,
COMMISSION MERCHANT, AND

SOLE AGENT in the UNITED STATES,

For Messrs. JOHN STEWART & SONS, Nurserymen, DUNDEE, Scotland.

Messrs. DAUVESSE, Nurserymen, ORLEANS, France.
I. DE LANGE, Florist, HAARLEM, Holland.

Goods purchased and sold on Commission. Custom house and forwarding business attend to with economy and despatch.

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EDWARD BOWN, Esq., Prest' Grocers Bank, N. Y. City.
MESSRS. DOUD & CO., Importers, New York City.

" ED. HABT & CO., Merchants, " "

" FROST & CO., Genesee Valley Nurseries, Rochester,
New York.

GEORGE R. MUMMA, Esq., Dayton, Ohio.

MESSRS. T. B. YALE & CO., Nurserymen, Rochester, N. Y.

S. B. MARSHALL, Esq., Prospect Hill Nur., Massillon, O.

J. E. ILGENFREITZ, Nurseryman, Monroe, Michigan.

MESSRS. HOOPES & BOW, Cherry Hill Nursery, Westchester, Penn.

T. J. SHALLCROSS, Esq., Nurseryman, Locust Grove, Kent Co., Md.

Fruit and Ornamental Trees

FOR THE AUTUMN OF 1883.

ELLWANGER & BARRY,

HAVE the pleasure to announce that they are as usual; prepared to offer for the Fall trade, the largest and most complete stock of WELL GROWN Fruit and Ornamental Trees, in the United States.

Planters, Nurserymen and Dealers,

Are invited to inspect the Stock, and consult the Catalogues, which give prices and terms.

The following Catalogues will be sent to applicants, prepaid, upon the receipt of postage stamps, as follows, viz:

No. 1 and 2 ten cents each; for No. 3, five cents and for No. 4 three cents.

No. 1—A Descriptive and Illustrated Catalogue of Fruit Trees.

No. 2—A Descriptive and Illustrated Catalogue of Ornamental Trees.

No. 3—A Catalogue of Green House and bedding Plants.

No. 4—A Wholesale Catalogue or Trade List.

ELLWANGER & BARRY,

MOUNT HOPE NURSERIES,

Rochester, N. Y.

Sept. 1st, 1883.

MISCELLANEOUS.

ALL HAIL THE TRIUMPH THAT

Fickardt's Cattle Powder
HATH ACHIEVED:

THOUSANDS ARE TESTIFYING TO ITS EFFICACY.

"The merciful Man is kind to his Beast."

AFTER years of study and experiment by the inventor he should and must take the place of the thousand and one nostrums gotten up and palmed upon the public as "certain remedies" for the cure of all disease, which the brute creation are " heir to." He has produced the one healing this advertisement, and none can be genuine unless bearing our MAC SIMONSE'S signature. The demand has been such that its sale has been chiefly confined to the State of Pennsylvania, but we have now consummated such arrangements that we are prepared to supply the numerous orders now on hand, as well as those we may hereafter receive from other States of the Union.

Knowing this Powder to possess all the curative properties here set forth, we deemed a fulsome tirade of words unnecessary, feeling assured that its own merits will secure for it ready sale. Being composed of pure vegetable materials, it can be safely and judiciously given to that noble animal the HORSE. Its effects are no *false pampering* of the system, creating a bloated carcass with a premature shedding of the hair; but on the other hand, it strengthens the digestion, purifies the blood, regulates the urinary organs, thereby improving and protecting the whole *physical condition* of the animal even when in an apparently healthy state.

To the Agriculturist and Dairymen it is an invaluable remedy for their MILK CATTLE laboring under HOGG diseases, — HOLLOW HORN, and other of the many complaints to which they are liable from a suppression of the natural secretions.

MILCH COWS are much benefited by occasionally mixing with their *top* or feed; it has a tendency to strengthen the animal, remove all obstructions from the milk tubes, promote all the secretions, and consequently adding much the health of the animal, quantity and quality to the MILK, Cream & Butter.

HOGS, during the warm weather are constantly overheating themselves, which results in their getting Cough, Ulcers of the LUNGS and other parts, which has a natural tendency to retard their growth. In all such cases a teaspoonful mixed in a bucket of feed and given every other day will speedily remove all difficulties, and the animal will soon increase in both Health and Fat.

For sale by all Druggists and Dealers. Price 25 cents per PACKAGE.

AGENTS.—T. & J. Hinchman, 120 Jefferson Ave., DETROIT; D. S. Barnes & Co., 202 Broadway, New York, Dwyer & Co., No. 232 North Second street, Philadelphia July

NOW READY—No. I. FOR AUGUST 1863.

The "Ledger" of the Magazines.

THE best, cheapest, and most attractive of all the Magazines is beyond all question.

Frank Leslie's Ten Cent Monthly.

Full of Original Stories, Perilous Adventures, Exciting Narratives with Beautiful Illustrations, combining the skill of the most popular American authors and artists.

TEN CENTS A NUMBER.

is all we ask for a magazine containing in each number numerous beautiful stories, Gems of Original Poetry, Illustrated in an exquisite manner. While to suit our readers, and make it a most welcome guest to every fireside, it will contain sketches and descriptions of men and things of interest in all parts of the World; the customs of various nations, the wonders of art, the beauties of nature in her animal and vegetable kingdom; and for the Ladies.

Several Pages of the LATEST FASHIONS, selected with great care, and from the most recent sources, and embracing Dresses for Children as well as for Ladies.

To prevent even this from tiring, we vary the feast, and all will laugh at the Illustrated Comic Stories and Humorous Illustrations, embodying the very essence of Mirth and Fun.

THE CREAPEST MAGAZINE KNOWN. It professes to be, and will, ever be, Nowhere else can TEN CENTS procure so much light and entertaining reading, of a pure and exalted character.

BUY A NUMBER.

FRANK LESLIE'S TEN CENT MONTHLY, and you will be satisfied that we have said less than it merits. Terms TEN CENTS a number. ONE DOLLAR a year.

This Magazine is electrotyped; back numbers can always be had by order of any Bookseller or News Agent.

FRANK LESLIE, 72 Duane st., N. Y.

Hickory Grove Nurseries,

TOLEDO, OHIO.

5000 and 3 yd DWARF PEAR TREES.

Attention of Nurserymen, Tree-dealers and Planters is invited to our stock of Trees, which is superior in quality and extensive in quantity—especially in Apples and Pears, being often cut back and pruned giving them fine heads with strong growing bodies. Our stock of other Fruits, Shrubs and Flowers is also good. Our box lumber (5-8 whitewood) is selected and dried, other materials on hand—giving dealers sufficient advantages in all respects. Trade lists gratis, correspondence solicited.

HALL & CO., Toledo, Ohio.

Toledo, Aug. 1, 1863.

Aug 2nd



For Rats, Mice, Roaches, Ants, Bed Bugs, Moths in Furs, Woolens, &c., Insects on Plants, Fowls, Animals.

"Many invisible remedies known."

"Free from poisons."

"Not dangerous to the Human family."

"Rats come out of their holes to die."

Sold Wholesale in all large Cities.

Sold by all Druggists and Retailers everywhere.

!! BEWARE !! of all worthless imitations.

See that "COSTAR'S" name is on each Box, Bottle and Pack, before you buy.

Address ENRY R. COSTAR.

Principal Depot, No. 482 Broadway, New York.

Sold by FARRAND, SHELEY & Co., Principal wholesale Agents, and by all the wholesale and retail Druggists in Detroit, Michigan.

Aug 6

THE OAKLAND COUNTY Farmers' Mutual Ins. Comp.
of Oxford, Chartered June 19, 1862.

CAPITAL. - - - \$50,000.

SURPLUS. - - - \$2588 67.

THIS Company, unlike any other Farmers' Insurance Company, is restricted by its Charter to the Insurance of private dwellings and the usual outbuildings connected with them and their contents.

Owners of this class of property, especially the farming community desirous of insuring must at once see the great advantages afforded them by a Company organized on this plan; it being wholly exempt from the heavy losses sustained by companies that include in their risks manufactorys, mills, taverns stores and other like hazardous property.

The Directors offer the following summary of their plan of operations:

1st. Risks will be taken only on private dwelling houses and the usual out-buildings connected with them and their contents.

2nd. No more than two thirds the value of any building insured.

3rd. Personal property insured at its full cash value.

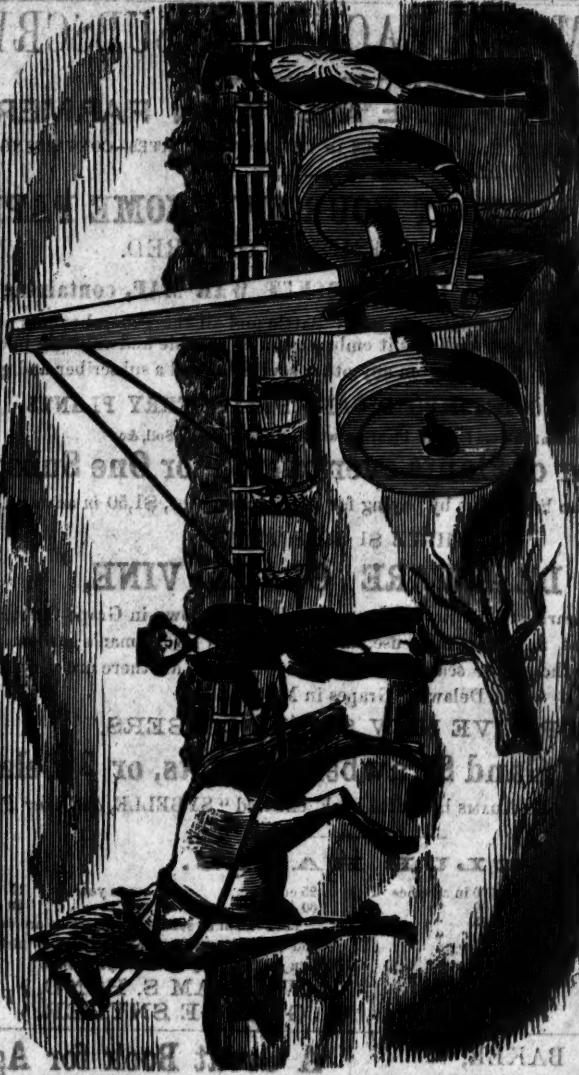
4th. No application for a longer term accepted than three years.

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L. G. TANNER,
LANSON PREDMORE, Vice President
F. W. FIFIELD,
JOHN G. STANTON, Secretary
WILLIAM H. FULLER, Treasurer.

We have received Godey's Lady Book, Arthur's Home Magazine, Frank Leslie's and the Atlantic Monthly for August and September; they are teeming with variety. For sale by Roys, Newsdealer, 1017 Jackson.

1017 Jackson

A NEW GRUB PULLER.



PATENTED BY JOSEPH FREY, FEB. 3, '63.

SIMPLE, CHEAP AND DURABLE,

And will pull all ordinary sized GRUBS with ONE TEAM as fast as you can hitch them. Address

BURNHAM & CO., AGENTS.

BATTLE CREEK, MICH.

FARMERS' WAREHOUSE,

BARON LIEBIG'S GREAT WORK ON AGRICULTURE
THE RESULT OF 16 YEARS' OBSERVATION.D. APPLETON & CO.,
443 & 445 BROADWAY, NEW YORK.

PUBLISH THIS DAY,

THE
Natural Laws of Husbandry
BY JUSTUS VON LIEBIG,

EDITED BY

JOHN BLYTH, M. D.

PROFESSOR OF CHEMISTRY IN QUEEN'S COLLEGE, CORK.
1 vol., 12mo. Cloth. 387 pages. \$1.50.

In this work Baron Liebig has given to the public his mature views on Agriculture, after sixteen years experiment and reflection.

Sent Free by Mail on Receipt of Price.

Strawberry Plants.

TRIUMPH GARDEN, and all the standard old varieties, as well as the best new ones, including the "GREEN PROFULITIC," for sale at low rates, and warranted true to name. Plants carefully packed and sent by mail or express. For catalogues gratis, address

FRANCIS BRILL,
NEWARK, New Jersey.SOUTH DOWN BUCKS
AND SUFFOLK PIGS.

THE subscriber has for sale several South Down Yearlings and Buck-Lambs. The yearlings are by Teller's 3d Testy, imported by Mr. Morris of Montfordham. The Buck Lambs are by Young York, grandsons York also imported by Mr. Morris.

Also several pairs of Suffolk Pigs, from Stickney's Importation. The above stock is at the Spring Brook Farm, near the village of Farmington, Oskaloosa County.

Address E. E. ELDREDGE,
September, 1863, 35 MURRAY Street, Detroit, Mich.

A PREMIUM FOR EACH NEW SUBSCRIBER

NEW VOL. OF THE MICHIGAN FARMER.

ONE OF THE LARGEST AGRICULTURAL MONTHLIES IN THE UNITED STATES—CONTAINING 50 Pages.

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For every New \$1 Subscriber, A LARGE POCKET WAR MAP, containing 84 Pages

Of valuable statistical information relative to every Battle and all the general events of the War. It should be in the hands of every man, as it embraces much reliable and valuable information which cannot be readily obtained from any other source. Send a subscriber and get it.

Or 25 STRONG TRIOMPH D' GAND STRAWBERRY PLANTS,

To be sent in time for Fall Planting, with instructions as to Soil, &c.

Largest Number of Plants ever offered for One Subscriber!

Old patrons can have either by paying for eighteen months, \$1.50 in advance.

FOR THREE \$1 SUBSCRIBERS,

A DELAWARE GRAPE VINE,

One of the newest, best, earliest, hardest and most productive known in Grape Culture. This variety is one of the finest flavor for table use, and should be in every man's garden. We will send them by mail at the proper season. Try and secure one, as there are very few *true* Delaware Grapes in Michigan.

FOR FIVE NEW \$1 SUBSCRIBERS,

200 Triomph d' Gand Strawberry Plants, or 2 Delawares,

Or a copy of Mrs. L. B. ADAMS beautiful book, entitled "SYBELLE, and other Poems."

CLUB RATES.

1 copy.	(one year)	\$1.00 in advance
5 "	"	4.00 "
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10 "	"	7.50 "
15 "	"	11.00 "
20 "	"	14.00 "

25 copies	one year	\$1.00 in advance
30 "	10.00 "	

Thus it will be seen that our terms are extremely liberal and within the reach of all, as a club of thirty got the FARMER for sixty-eight cents a year each.

**WILLIAM S. BOND,
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GEORGE BAKER,
TOLEDO NURSERIES,
TOLEDO, OHIO.

Cultivates extensively
Fruit and Ornamental Trees, Grape
Vines, Shrubs, Roses, &c.

Nurserymen, Dealers, and those planting largely, supplied
at LOWEST RATES.

The Excelsior Bee Hive.

All who test

HANNUM'S PATENT BEE HIVE,

Agree that it is the

BEST HIVE EVER INVENTED!!

It is the only Hive that gets rid of the Moth Worm! It clears itself perfectly of dead Bees, and all foul matter. The most thoroughly ventilated Hive known! The cheapest and most simple in construction. It has all advantages of other Hives, besides its own important and exclusive advantages.

For further particulars address

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